

# BIENNIAL REPORT

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**Florida**

**ME AND FRESH WATER FISH COMMISSION**

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## *Cover Photograph*

A misty dawn on Ocheesee Pond in Jackson County, Northwest Florida. Florida-style bateaux with a push-pole await the early-morning fisherman who is certain that he'll find a lunker bass or a concentration of bream in the still waters around the boles of the majestic cypress trees. Photograph by James T. Floyd, Game and Fresh Water Fish Commission.



STATE OF FLORIDA

GAME AND FRESH WATER FISH COMMISSION

TALLAHASSEE

January 31, 1961

HONORABLE FARRIS BRYANT  
*Governor of State of Florida*  
*State Capitol*  
*Tallahassee, Florida*

DEAR GOVERNOR BRYANT:

I have the privilege of submitting to you the Biennial Report of the Florida Game and Fresh Water Fish Commission for the period ending June 30, 1960.

During this time, we have been concerned primarily with improving conservation practices, providing adequate law enforcement, promoting public relations, and increasing game and fish populations and public hunting and fishing areas, together with eradication of undesirable fish, control of noxious aquatic weeds, conservation of surface waters, and establishment of boat landing ramps and water access areas.

At the present, and in the future, we in Florida are witnesses to a human population explosion which is creating greater demands upon all State Agencies for more extensive services. This is especially true, in our area of conservation, in increased hunting and fishing pressures, as well as the demand for multiple-use recreational areas within or adjacent to our present management areas and fresh water bodies of Florida. We also feel the effects of continued land developments for residential and business uses, which are creating additional competition in land usages. While we welcome continued growth of Florida population and industry, we must, in the name of conservation, continue to jealously guard those areas of our great State which are adapted to good hunting, fishing and outdoor recreation.

We take heart in the fact that you, too, are a strong advocate of conserving our State's natural resources, and we welcome the opportunity to work under your leadership to assure the maximum hunting and fishing recreation for all the people.

Our progress, however, will be limited in direct proportion to the funds available to us; and even though special legislative appropriations in the past have permitted limited programs of rough fish and noxious weed control, as well as the conservation of surface waters, actually we have made only a small beginning into the overall Statewide need. Our most glaring financial deficiency is caused by the failure to have a more uniform and equitable fishing license structure. We sincerely invite your consideration of reasonable and acceptable legislation, as well as your leadership in presenting such a program to our State Legislature.

On behalf of the Commission and Staff, I want to express our appreciation for your keen interest in our natural resources, and for the help and cooperation of the other agencies of State Government with whom it has been our privilege to work during the past biennium.

We hope this Biennial Report will permit you and other State officials an opportunity for appraisalment of our work and progress over the past two years.

With kindest personal regards, I remain

Sincerely,  
JULIAN R. ALFORD, *Chairman*





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# REPORT OF PROGRESS

A. D. ALDRICH, Director

**P**ROGRESS in all phases of conservation work has resulted from the vigorous and continuing efforts made by the Florida Game and Fresh Water Fish Commission during the biennial period.

In general, the Commission continued to devote its efforts toward rendering better service to the sportsmen and general public of the state. This was done in many ways and on many levels.

Personnel qualifications and standards were improved through application and development of the Merit System and Employee Classification and Salary Schedules. The use of standardized competitive examinations for new employee applicants has been very beneficial.

General policies of the Commission were strengthened and clarified. The Wildlife Code Book and all regulations were streamlined and made more effective.

Better liaison between the Commission and the public, and between the Commission and other State and Federal agencies was established.

The general overall scope of departmental activities and services was continuously expanded, and new fields of endeavor added, by more effective usage of existing personnel and equipment.

During the biennium, there was a continuation of the programs to obtain and open additional public hunting and fishing areas, and the acquisition of public access areas. Also continued was the effort to attain sound fish and wildlife management practices based upon accurate technical research programs.

The effort to bring all programs of the Game and Fresh Water Fish Commission, especially the setting of

hunting rules and regulations, closer to the people was accelerated.

Better coordination and efficiency was achieved in and between all divisions and sections of the Commission, with greater emphasis placed on law enforcement and public services.

On the overall, the record serves to show as a concrete indication of the determination of the Commission and its employees to have a more and more progressive program of fish and wildlife conservation in Florida.

Following are some of the highlights of work accomplished during the biennial period:

## CHANNELS

There has been a continuing effort to clarify the channels of authority within the Commission. This is necessary to enable all staff officers and employees to re-evaluate and reorganize their activities, procedures and objectives.

The administrative task is to properly delegate authority down through clarified channels of command so as to coordinate all employees and divisions and sections into an aggressive and efficient work force.

To properly issue commands and have them executed, there must be clear lines of communication from administration down through the chain of supervisory command to each and every employee in the field. But this is only half the task. There must, in turn, be clear lines of communication from the field employees returning up through the chain of supervisory command to the administration.

It is only when both of these lines of communication—from the top to the bottom, and the return response from the bottom back up to the top—are clear and functioning that the operating organization becomes truly effective.

Always, the employees must be regarded as the "internal public" of the Commission, and steps must be taken to achieve good liaison, morale, and coordination of work and objectives.

A great deal of effort is being spent so as to achieve these fundamental principles of good administration.

## PAY SCALES

The salaries for qualified employees has been steadily increased, insofar as possible in reference to the financial income to the State Game Fund from which the Commission is operated. The Commission has, rightfully, been demanding more services and efficiency from its employees, and, in return for this, the Commission has held to the steadfast aim to gradually increase base salaries for employees. This is necessary in order to attract and hold the qualified conservation career employees able to give the services and efficiency required by the Commission.

## MERIT SYSTEM

The upgrading of personnel and the increases in base salaries has been achieved through the installation of an effective Merit System program. The Commission's Merit System is separate from the Florida State Merit System, but is modeled closely after the State Merit System, and utilizes its best procedures.

Part of the intrinsic value of a Merit System is the provision for

periodically rating all employees through a supervisor's grading system. Dismissals from the service or inservice promotions may then be made on valid evidence resulting from the accumulation of ratings and performance records. Thus, the Merit System protects good employees, while providing a logical method for upgrading or removing inferior employees.

### EMPLOYEE TRAINING

One of the Commission's greatest continuing efforts is toward the installation of a permanent and highly effective employee and supervisors training system. A training system affords the employee a method for in-service improvement of himself, and a chance at promotions to higher position. In time, a good training system will develop new supervisory personnel of high calibre for the future, through in-service training and promotions.

### DATA ANALYSIS

Statistical data analysis machine (IBM) operations were installed for the purpose of property inventory, cost control, accounting and scientific data analysis. This allows much better handling of fiscal and property operations, and the data analysis is extremely valuable to efficient and economical planning and execution of work programs.

### COORDINATION WORK

Interagency coordination was greatly improved during the biennial period, most especially through the Florida Inter-Agency Conference, of which the Commission's director has served as chairman since the inception of the Conference. This conference is the meeting place for all state and federal agencies that are involved in any phase of work in natural resource conservation, or affecting such conservation work.

Other achievements included the automatic review by the Game and Fresh Water Fish Commission of all dredge-and-fill applications received by the Florida Internal Improvement Fund Trustees. The Commission investigates and reports as to the effects of these operations on fish and wildlife resources.

Perhaps the most outstanding program yet achieved, a program which will have far-reaching effects

into the future, is the current inventory of all state-owned lands in Florida. This may result in the setting aside of some lands for future public multi-purpose recreation.

Cooperative agreements with the Florida Forest Service, the U. S. Forest Service, the U. S. Corps of Engineers, the Central and Southern Florida Flood Control District, and similar agencies, were also achieved.

### CAPITAL IMPROVEMENTS

Outstanding during the biennial period were the capital improvements of constructing Regional Headquarters buildings at Lake City, Ocala, West Palm Beach and Panama City. Construction of the Lakeland Regional Office is slated for the forthcoming biennium.

### OTHER PROGRAMS

Progress made during the biennium in all Divisions and Sections

of the Commission is adequately presented in the various reports contained in this Biennial Report.

### GENERAL

There can be little doubt that the Florida Game and Fresh Water Fish Commission made considerable progress in all phases of its activities during the biennial period. More important, the basic groundwork was laid to allow a greatly accelerated program to take effect during the current biennium. Much has been done, but a great deal more remains to be done. We feel certain that, with the help of all sportsmen and the general public, we can continue to do our job of conserving, protecting and restoring the fish and wildlife under a wise resource-use program that will guarantee an outdoor heritage for future generations. ●



# FUTURE PROSPECTS

**N**O BUSINESS should be, or can be, operated properly without comprehensive plans for the future.

The Florida Game and Fresh Water Fish Commission has such plans. Plans which are designed to insure future satisfaction for the Florida sportsmen—the fishermen and the hunter. Plans which affect the future of our fish and wildlife. Plans which will help guarantee a heritage of natural resources for our children and their children.

We sincerely believe that much has been accomplished during past years, as the result of active cooperation from interested sportsmen and the general public. And we fully realize that much more must be done to protect, preserve, conserve and utilize our natural wildlife resources.

We, the Commission, firmly believe that there is a much brighter future for Florida wildlife interests during the coming years. We believe that sportsmen are fully within their moral and legal rights in demanding a more aggressive and effective program for Florida wildlife and the conservation thereof. We believe that it is the duty and the responsibility of this Commission to do everything within its power to implement such a program.

BUT this cannot be done without the firm and active backing of all interested sportsmen and citizens. Such a future cannot be attained without adequate finances. And it most certainly cannot be done without aggressive and progressive planning.

Here are the general plans that will be undertaken by the Game and Fresh Water Fish Commission:

First will be a continually improved and more effective Law Enforcement program. The Commission

plans to continue employing and training a progressively higher caliber of Wildlife Officer. We plan to continue improving the cooperation and coordination of our Law Enforcement efforts. We plan to continue improving the equipment of the Wildlife Officers, so that they may more efficiently perform their duties in the field. We plan to obtain more simplified and improved Fish and Game Laws and regulations, based on sound management principles and resource-use needs.

Number two on the list of future plans is the acquisition and development of additional public hunting and fishing lands. This is of utmost concern to every fisherman, hunter and wildlife student. Florida is developing rapidly. Without an aggressive land acquisition program, areas available for the average sportsman will be drastically reduced. More lands must be held in trust for the Florida fisherman and hunter, and every other citizen—public lands accessible for the enjoyment of all.

The Commission plans to work toward opening more privately owned lands to controlled public hunting, fishing, boating and general recreation purposes in conformance with sound wildlife and land management principles.

The Commission intends to discover and develop new techniques and procedures that will enable the greatest possible realization of the potentialities of game and fish populations, and fishing and hunting opportunities.

We intend to do everything within our power to study all plans formulated by State and Federal agencies when such plans will affect the waters, soils, forests, wilderness, and fish and wildlife of the State of Florida. We intend to continue, where

necessary, to make recommendations for changes in any plans or programs which we consider to have a potential detrimental effect on the fish and wildlife, and other natural resources, of the State. We intend to take any necessary steps that will help safeguard our wildlife heritage.

We plan to continue acting in our capacity of custodian and watchman of our natural resources, especially fish and wildlife.

In the future, we plan to continue the Commission's Merit System for Employees, to insure that all employment is based on aptitude and qualifications of employee applicants. We plan to continue training our employees so that they will be better fitted for their work.

We plan to continue serving the general public in all possible ways—Civil Defense, rescuing lost persons, aiding citizens in difficulty, furnishing information to the general public, answering calls for emergency help and transportation, and similar public service duties.

We plan to work toward a more uniform and equitable Florida fishing and hunting license structure that will be fair to one and all.

We plan to support legislation that will be beneficial to the sportsmen and to wildlife. We plan to work for legislation that will include stiffer penalties for game and fish law violations, more satisfactory control of airboats, more funds for hyacinth control and acquisition of public lands and waters, more workable laws affecting fish and wildlife, and a more uniform license structure.

The Commission also plans to improve its programs dealing with farm pond management, food and cover plantings for wildlife, youth conservation education, public information and education, and the many other vital phases of conservation activities.

We know that there is a bright future for the Florida sportsman. The Florida Game and Fresh Water Fish Commission plans to do everything within its power to work toward that brighter future. This future must be attained through the cooperation of everyone in Florida.

We are confident that we will ultimately reach the goal of realizing all of Florida's vast fish and wildlife potential. ●



# ADMINISTRATION of the COMMISSION

**Dr. O. EARLE FRYE**  
Assistant Director

**T**HE FLORIDA Game and Fresh Water Fish Commission was created by a Constitutional Amendment passed at the general election of 1942, and becoming effective January 1, 1943. Under this amendment, there is vested in the Commission all regulatory and management authority for birds, game, fresh water fish, fur-bearing animals, reptiles and amphibians.

The Commission consists of five Commissioners — one of whom is appointed by the Governor from each of the five Congressional Districts of Florida that existed as of January 1, 1941. Such appointments are for terms of five years, are subject to confirmation by the Florida Senate, and are staggered so one appointment falls due each year.

The overall administration of the Game and Fresh Water Fish Commission is delegated by the Commission to a Director who is appointed by and serves at the pleasure of the five-man Commission.

Assisting the Director, and immediately under his supervision, are an Assistant Director, a Secretary to the Commission, personnel working on special assignments such as special investigators, and all Staff Officers.

Staff officers of the Commission

consist of the Chiefs of Fiscal, Game Management, Fisheries, Information and Education, Communications, Aviation, and the Magazine Editor and the five Regional Managers.

The lines of Administrative authority are as depicted in the attached diagram. This diagram shows that the Director is immediately responsible to the Commission. All Chiefs of Divisions, or Staff Officers, are, on the other hand, responsible to the Director. Division personnel are, of course, responsible to their Staff Officers.

Thus, when a policy is set by the Commission, it is administered by the Director through his Staff Officers and their personnel.

Under this arrangement, it is the Staff Officers' duty not only to attend to their particular administrative duties, but also to keep the Director, and through him the Commission itself, fully informed as to all important activities in all administrative branches.

Prior to 1951, all Game Commission programs were organized and put into effect from one state-wide office in Tallahassee. This resulted in a cumbersome procedure that resulted in a loss of vital contact with personnel working in the field, and the local problems with which they were constantly confronted. Staff

Officers in the Tallahassee main office were often isolated, not only from their own personnel, but also from the sportsmen and general public of the State of Florida.

In an effort to overcome this operational handicap, the Administrative set-up was decentralized to attain closer contact with field problems and personnel.

To accomplish this, Game Commission Regional offices were established in strategically located spots throughout the state. Five Regions, and offices, were located in Northwest Florida, Northeast Florida, Central Florida, South Florida and Everglades Florida, with headquarters now in Panama City, Lake City, Ocala, Lakeland and West Palm Beach. Permanent headquarters buildings have been constructed at all of these sites, except Lakeland, and plans are now underway to construct the Lakeland office building in the near future.

Each Region was placed under a Regional Manager, responsible to the Commission's Director and Assistant Director. The Regional Managers are directly responsible for all activities within the geographical area composing their Region. These include all work and personnel in law enforcement, communications, game and fish management, aviation, information and education, and budgetary matters.

In order to make this operation workable, all activities of a technical nature must be supervised jointly by the Regional Manager and the Division Chief or Staff Officer of the appropriate function.

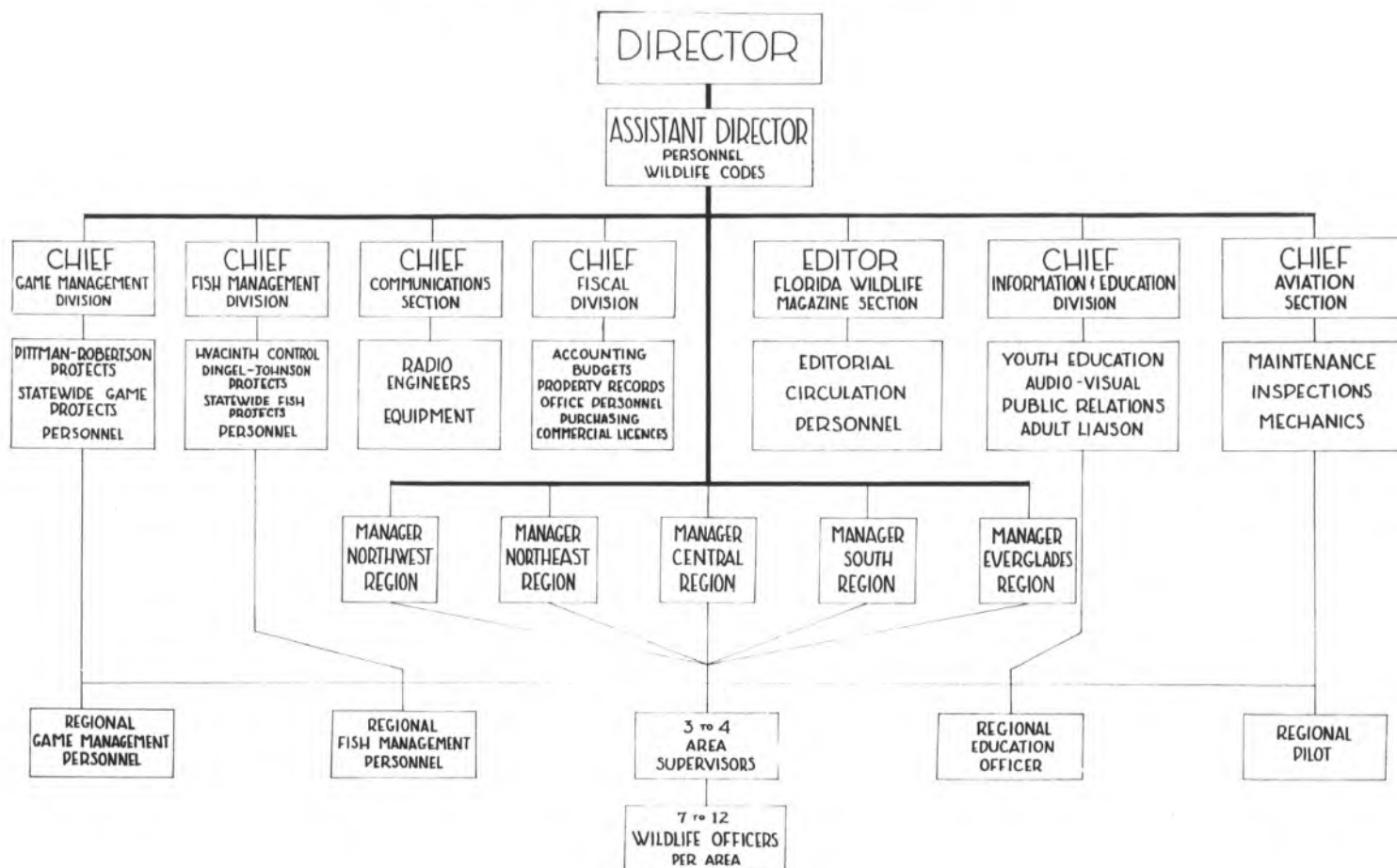
Thus, the Regional Manager, and his personnel, are assisted, at the upper level, by various Staff Officers. All state-wide programs set into effect by the Commission are organized and coordinated, with the cooperation of the Regional Managers and their personnel, by the Division Chiefs. It is therefore possible to put any overall program into immediate effect in all points of the state, with no discrepancies in policy or administration. A state-wide program is thereby operated exactly the same in every point of the state.

The close cooperation between the Director, the Assistant Director, the Division Chiefs and the Regional

# FLORIDA GAME AND FRESH WATER FISH COMMISSION

## ADMINISTRATIVE SETUP

Five Commissioners—One appointed from each of five Congressional Districts  
by Governor under Constitutional Amendment



Managers is the most important item in the entire Administrative set-up.

Answerable to the various Staff Officers are additional sub-supervisory personnel. To the Chief of Fiscal is delegated responsibility for the State Property Officer, and Book-keeping and Auditing personnel. The Game and Fish Management Chiefs are responsible for the leaders of Federal and State-wide Projects, such as the hyacinth control program, wildlife management areas, deer and turkey restoration, and water fowl and mourning dove research and management projects. The Information and Education Chief is responsible for the Chief of Youth Education, Chief of Audio-Visual, Chief of Conservation Extension, and the five Regional Information Officers. Regional Managers are responsible for regional fish and game and education officers, and area supervisors.

Each of these is, in turn, responsible for other personnel. For example, the Area Supervisor is responsible for law enforcement activities in from two to four counties within a Region, and is directly in charge of the activities of law enforcement personnel in such areas.

All of the lower level supervisory personnel actually participate in carrying out the work concerned. For example, Area Supervisors spend a great deal of their time in actual law enforcement as well as in supervision of law enforcement in their respective areas.

The degree to which any individual can participate in actual work



depends, of course, upon the extent of his administrative duties. The farther up the administrative ladder he goes, the more he is occupied with administrative matters, and the less he is able to participate in the work he is supervising.

One of the most important duties of the Director is the collection and assimilation of information from the various staff members for presenta- tion to the Commissioners for use in

evaluating and establishing overall policies of the Commission. It is the Director's very definite responsibility to keep the Commissioners fully informed as to activities in the various phases of conservation endeavors, and as to public opinion regarding any specific issue. This can be accomplished by frequent personal contacts with individual Commissioners, and by means of periodic reports covering Commission activities.

Beyond assisting the Director in these vital tasks, the Assistant Director customarily also handles details such as Personnel employment, training and qualifications, as well as revisions of the Wildlife Code Book rules and regulations, and certain legal affairs. He does these things as a portion of his responsibility to the Director.

By the use of such direct descending lines of authority and administration, and by the returning lines of responsibility, personnel welfare and public contact, it is possible to administer a complete and well-integrated program of wildlife conservation for the State of Florida.

#### EMPLOYEE STABILITY

If you are considering a career in the wildlife conservation and law enforcement field, you will be interested in the following facts:

Fifty-eight percent of all the employees of the Florida Game and Fresh Water Fish Commission have been employed for a period of five years or more.

Twenty-eight percent of the employees have been with the Commission for eleven years or longer.

Following is the percentage of employees in the various five-year brackets:

Employed for	Percent of Total
1 to 5 Years	48%
6 to 10 Years	23%
11 to 15 Years	21%
16 to 20 Years	5%
Over 20 Years	3%

Note that the Game and Fresh Water Fish Commission, in its present form, was created on January 1, 1943. A few of the older employees worked for previous Game Commissions.

# MERIT SYSTEM

## for Employees

**D**URING the biennium, the Game and Fresh Water Fish Commission further aligned its Merit System of Examinations for employees with the standard procedures of the approved State Merit System.

The Commission's Merit System is designed so that all employment is based on the aptitude and qualifications of each employee. The system is designed to be a continuous program which will better fit all employees of the Commission for their particular work, and, in turn, render better service to the people of the State of Florida.

Since the first examination, October 15, 1955, the Commission has hired all of its employees under the Merit System procedures.

An indication of the selectiveness of the Merit System is that in the first five years of operation, a total of 1,299 applications for employment was received by the Commission. Of the 1,299 applicants, 172 (or 7½%) successfully completed the competitive examinations and were employed as Wildlife Officers in replacements of resigned or retired employees.

All applicants must successfully complete a series of written examinations, with the examining being done in various locations throughout the state in order to encourage additional examinees. The examinations are then graded by an impartial system.

Those who successfully complete the written examinations are then called before an oral interview board. Those who successfully complete oral interviews are then placed on the Commission's Merit System Eligibility List for employment when vacancies occur.

New employees are then put through an extensive training period, during which they are drilled intensively in all facets of the Commission's programs, policies and operations.

After completing the training course, the new employees are then assigned to the field.

Under terms of the Commission's Merit System, applicants taking examinations must have a high-school education, or the equivalent, and must be between the ages of 21 and 35. They must also have resided in Florida for at least two years immediately preceding employment, un-

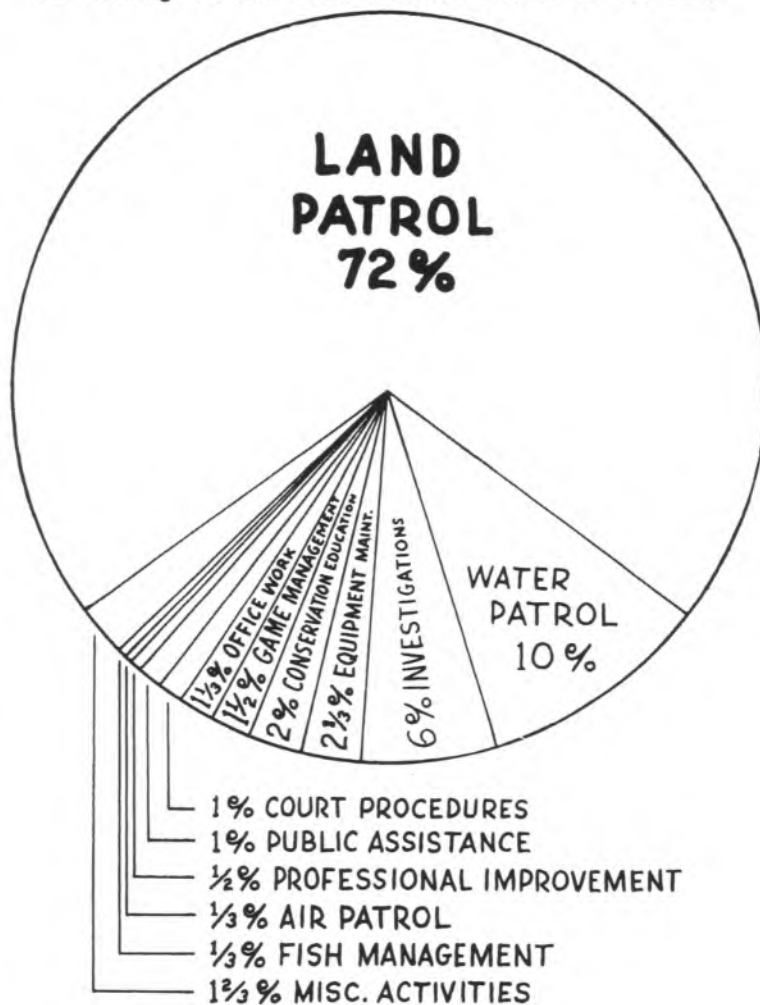
less a qualified resident is not available. Applications for employment may be made to the Commission at any time. All applicants are then notified of the date and places of the written examinations.

During each year of the Merit System Examinations, the Commission finds that the overall caliber and quality of employee applicants improves steadily throughout the year, as prospective employees became familiar with the Merit System of the Commission.

As the result, the Merit System has enabled the Commission to place better-qualified and better-trained officers in the field. The increase in employee efficiency and morale has been noteworthy. ●

### HOW...

The Average Florida Wildlife Officer Distributes His Time





**V**IGOROUS enforcement of the Game and Fish laws will always be an extremely important phase of a good wildlife conservation program. It will always be necessary to have game and fish laws, and it will always be necessary to see that such laws are properly enforced.

Florida's Wildlife Officers have the tremendous task of enforcing the game and fish laws applying to approximately 39,000,000 acres of land and water within the confines of the State of Florida. With the second largest woodland area in the United States, and with over 30,000 named fresh-water lakes, countless rivers and streams, and 58,560 square miles of territory to patrol, the Florida Wildlife Officer is faced with a task that is all-important and never ending.

Our Florida Wildlife Officers are engaged in a tremendous task that is most important to the welfare of the State of Florida. The importance of each individual Wildlife Officer cannot be over-emphasized.

While in the field, the Wildlife Officer represents the authority, the responsibility, the duty and the potentiality of the entire Florida Game and Fresh Water Fish Commission. To the average fisherman and hunter, who has no other contact with the Commission, the Florida Wildlife Officer IS the Florida Game and Fresh Water Fish Commission.

It is vitally important, therefore, that our Wildlife Officers be men of



sonal character and educational background. They must have the physical stamina necessary to a lifetime of rugged work in the outdoors under difficult conditions. They

and the general public of Florida.

The Wildlife Officer must also be capable of working independently, by himself, in wilderness areas where he cannot obtain either com-

# Law Enforcement and The Wildlife Officer

good character and excellent qualifications. They must be thoroughly trained in all techniques of good law enforcement and must understand general wildlife conservation and management principles. It is important that they have both good per-

sonal character and educational background. They must have the physical stamina necessary to a lifetime of rugged work in the outdoors under difficult conditions. They

must have the mental attributes necessary to keep abreast of the rapid advance in modern wildlife conservation theories.

any, assistance or instructions. He must, in other words, be self-operating, self-governing and self-supervising at many times.

It takes many qualifications to make a good Wildlife Officer. Therefore, it is necessary that all Wild-

life Officers pass a strict mental, physical and character examination before being employed by the Commission.

One of the more important aspects of the Law Enforcement branch of the Commission is that it is subdivided geographically, corresponding to the five administrative Regions of The Commission. Each Region has a force of Wildlife Officers, supervised by several Area Supervisors, under the authority of the Regional Manager.

The job of Wildlife Officer is essentially the same in all Regions of the State. The Officers must, however, adapt their work procedure to fit local circumstances, such as geography, topography, population concentrations of wildlife and humans, and seasonal variations. With good transportation equipment — cars, trucks, Jeeps, airboats, marsh buggies, horses, boats, motors, airplanes — and effective radio communications, the Florida Wildlife Officers effectively cover the entire State, insofar as is practicable under present budgetary requirements.

But Law Enforcement, or the sole responsibility of enforcing the Game and Fish Laws, is not the Wildlife Officer's only duty. The Officer is also expected to serve or assist in local game and fish management work, community service, special investigations and public appearances. The Wildlife Officer is expected to make suitable speeches before organized groups, maintain his equipment in good working order, assist in fair exhibits and special promotions, and make many appearances in court. He is also concerned with maintaining good relations between the sportsmen of the state and the Game and Fresh Water Fish Commission. And, since he has specialized transportation equipment, good radio communications and the necessary experience, the Wildlife Officer is often called upon for aid in search and rescue missions involving distressed persons.

In all, the Wildlife Officer has a well-rounded schedule of duties that is extremely important in the program of conservation, protection and utilization of our fish and game.

During the biennial period, the Florida Wildlife Officers in the five regions accomplished the following

totals:

Traveled a total of 5,534,212 miles and made 7,318 arrests for violations of the fish and game laws. They spent a total of 726,354 hours in land patrol and 100,736 hours in water patrol. An additional 88,715 hours were spent in miscellaneous duties, including court appearances, meetings, equipment maintenance, office



**OUTSTANDING Wildlife Officer Award for 1959 was presented to Ernest G. Pierce, right, of Clermont, by Central Florida Regional Manager D. C. Land, Ocala. Pierce was selected from Game Commission tests and interviews concerning on-the-job training and activities. He has attended 80 hours of special schooling, and continually works at improving his knowledge of conservation and law enforcement techniques.**

work, and similar duties.

By definition, the Florida Wildlife Officer is the man who is primarily concerned with enforcement of the Game and Fish Laws. However, all male employees of the Commission, except office janitors, are actually commissioned as wildlife officers with the duty of enforcing the Game and Fish Laws, no matter what their routine jobs might be.

Just as the Wildlife Officer is concerned with good public relations, so is the Information and Education Officer concerned with Law Enforcement. And, as the Wildlife Officer is concerned with good game and fish management work, so, too, is the Game or Fish Management Technician concerned with good Law Enforcement.

The policy that it is mandatory for all employees to be concerned in all

phases and programs of the Commission is of primary importance to the sportsmen of the State of Florida. It is the only way in which a true wildlife conservation program may be achieved.

The fine cooperation between the Wildlife Officers of the Florida Game and Fresh Water Fish Commission and the Federal Game Agents of the U. S. Fish and Wildlife Service in Florida should also be mentioned. The excellent teamwork between the three Federal Agents stationed in Florida and our Florida Wildlife Officers has been responsible for improved protection not only of migratory game but of resident species as well, and has been extremely effective in many difficult cases.

There were also continuous improvements in the Training Program whereby all new Wildlife Officers undergo a brief but comprehensive training program before being assigned to their duties in the field. As a result, the inexperienced officer is much better prepared to assume the responsibilities of his new job.

All Wildlife Officers, new and old, undergo periodic Training Schools where they receive the latest information concerning all Commission programs and activities. In Training, the accent is on Fish and Game Laws, Law Enforcement Techniques, Wildlife Code, Commitment and Imprisonment, Searches, Seizures, Forfeitures, and similar topics. Other studies include the State Constitution, Game Management, Fish Management, First Aid and Safety, Federal Court Procedures, Public Relations and many other courses of instruction.

The well-trained Wildlife Officer is a good Wildlife Officer.

The Florida Game and Fresh Water Fish Commission realizes that only through the cooperation of an informed and interested public can game law violators be controlled and good conservation practices be employed. This is the reason why Wildlife Officers are expected to serve in so many diverse capacities.

Law Enforcement is, without question, one of the most important branches of the many varied programs and activities carried on by the Florida Game and Fresh Water Fish Commission. ●

**T**O PRESENT a broad view of the overall program of the Fisheries Division, brief descriptions and objectives of each work unit are outlined here.

It should be pointed out that various projects may terminate periodically, with new projects beginning infrequently. Thus, the Fisheries Division program is not necessarily confined to the descriptions presented here, since it is most practical to adopt a flexible approach to the many complicated and important problems in fisheries work.

In the future, projects may include new work designed to make major contributions to the sum of knowledge concerning the Florida freshwater fisheries so that adequate management programs may be developed and applied. These may include creel census data reports and analysis, comparisons of growth rates in black bass and other impor-



# FISHERIES DIVISION

tant species, and adequate studies of fishing license structures. Also, as new chemicals are developed and manufactured for better control of fish populations and undesirable aquatic vegetation, such chemicals will have to be carefully tested and techniques developed for maximum usage and applications.

Outlines of the various objectives and programs follow.

## LICENSE STRUCTURES

Preliminary work was accomplished to analyze critically the present structure of Florida fishing licenses and fees. As the study is carried forward, it is hoped that recommendations may be made as to feasible improvements needed to attain a more equitable and uniform license structure.

Although fishing license revenue is a major portion of the revenue accruing to the State Game Fund, there is now little reliable information to be had as to license buyers, sellers, causes and origins. Present information is essentially limited to numbers

and types of licenses sold, and little is known concerning the habits of license-buyers and their reasons for purchasing.

In order to attain an equitable license structure, it is necessary to analyze the various groups and origins of those who buy licenses, so the structure may be adapted equitably to the buyers.

With full cooperation from the County Judges of Florida, who handle license sales and distribution, we are now obtaining copies of licenses sold, and information about individuals and groups of fishermen. This is being carefully compiled, analyzed and correlated.

When sufficient reliable information is at hand, then recommendations may be prepared.

Several preliminary graphs and tables are included in this Biennial Report, showing trends of resident and non-resident license sales for the past several years.

**E. T. HEINEN—Chief**

## FEDERAL AID PROGRAM

Financing of the Federal aid to Fisheries program is obtained under the so-called Dingell-Johnson program by a return of funds from the Federal tax monies on sales of fishing tackle and equipment. The amount made available to a state is determined by a formula which utilizes the geographical area of the state in ratio to the number of people purchasing fishing licenses. The proportion of money coming back to a state is, therefore, based on the area of the state and the number of license buyers.

When a state participates in such a program, the Federal aid money is returned on a state-matching basis of 75%-25%, with the state furnishing the twenty-five percent. Thus, for \$25.00, a state receives a return of \$75.00 in additional funds to expend within certain approved projects. A D-J project, therefore, costs the Commission only twenty-five percent of the entire costs of the project.

Dingell-Johnson Aid projects during the past biennium follow:

## LAKE AND STREAM SURVEY

This F-6-R project continued mapping and sampling of certain watersheds, and completed work on the Apalachicola River. A publication consisting of maps and narration of the watershed was prepared and



distributed, with extra copies presently available from Commission Offices.

Work was also completed on the Choctawhatchee River Watershed, with final maps and publication due momentarily. These also will be available from the offices mentioned above.

The canal area of the Everglades Region, the Suwannee River Watershed, and the West Florida Yellow and Shoal River Watersheds have also been or are currently being investigated, with publications due within the coming biennium.

#### RIVER BASIN-FISHERIES STUDIES

The F-8-R River Basin Fisheries Investigation studies were undertaken to examine proposals and make recommendations regarding fish management on the lands and waters included in the Central and Southern Florida Flood Control District project, for which the U. S. Corps of Engineers is the planning and construction agency. The project boundaries include all or part of seventeen central and south Florida counties, and some of Florida's major rivers and lakes; i.e., the Kis-

simnee River, Lake Okeechobee, Caloosahatchee, and a major portion of the St. Johns River.

Much of the work of this Project during the past two years has been spent in the two large conservation pools of South Florida. These areas are slowly taking shape, and they hold promise of offering some of the most important fishing areas in the entire southeast. Recent studies along the Tamiami Trail, which borders the #3 Pool, have indicated that fishermen there contribute almost \$1,000,000.00 annually to the local economy.

This economic survey became necessary in order to justify certain expenditures for fisheries improvement work which were recommended for inclusion in the project works. A fishery contributing substantially to a local community certainly merits the attention of such a special survey. Indications are that the extra works recommended will be provided, thereby assuring an adequate, continuing fishery with sufficient parking and access areas available for the general public.

Other investigations and reports by this Project included the Caloosa-

hatchee River, Northwest Shore of Lake Okeechobee, various smaller watersheds, and beginning work in parts of the Upper St. Johns River watershed. From these studies will come additional recommendations for preserving the famous fresh water fishing in that area, in the event they are endangered by proposed construction plans of other agencies.

#### ANADROMOUS FISH STUDY

This F-10-R Project deals primarily with striped bass and efforts to establish them in larger quantities, particularly in the Jim Woodruff Reservoir, Lake Seminole, Northwest Florida.

Since the lake borders both Florida and Georgia, mutual interest in the fishing potential of the lake is shared by both states. Joint meetings of fisheries workers from Florida and Georgia have been held, with a cooperative study of the reservoir being formed, and work begun both in the lake and below the dam in the Apalachicola River.

Work on the anadromous striped bass is concentrated in this area, since a greater population of both young and adult specimens has been reported from this watershed than

### AN ANALYSIS OF FLORIDA'S SPORTFISHING LICENSE SALES 1940-41 THROUGH 1959-60 GAME & FRESH WATER FISH COMMISSION

Fiscal Year	Resident-State		Non-Resident								Grand Totals	
	Number	Amount	State		14-Day		3-Day		Non-Resident Totals		Number	Amount
			Number	Amount	Number	Amount	Number	Amount	Number	Amount		
1940-41	21,132	\$42,264	5,848	\$29,260	†10,868	\$21,736			16,716	\$50,996	37,848	\$93,260
41-42	63,540	63,540	5,711	28,555	†11,057	22,114			16,768	50,669	80,308	114,209
42-43	59,071	59,071	5,425	27,125	† 7,508	15,016			12,933	42,141	72,004	101,212
43-44	64,003	64,003	7,432	37,160	† 8,604	17,208			16,036	54,368	80,039	118,371
44-45	73,282	73,282	9,898	49,490	† 9,001	18,002			18,899	67,492	92,181	140,774
45-46	59,020	103,285	4,877	34,139	†20,792	41,584			25,669	75,723	84,689	179,008
46-47	122,186	213,826							45,521	*120,000	167,707	*333,826
47-48	160,512	280,896		Breakdown Not Available					62,639	180,418	223,151	461,314
48-49	190,145	332,754							83,869	238,047	274,014	570,801
49-50	186,265	325,964	15,339	107,373	†74,147	148,294			89,486	255,667	275,751	581,631
50-51	180,113	315,198	17,399	121,793	†89,292	178,584			106,691	300,377	286,804	615,575
51-52	191,219	334,633	12,835	128,350	†77,874	233,622			90,709	361,972	281,928	696,605
52-53	219,678	384,436	14,771	147,710	†84,328	252,986			99,099	400,694	318,777	785,130
53-54	239,529	419,176	14,443	144,430	†84,651	253,953			99,094	398,383	338,623	817,559
54-55	268,413	469,723	13,760	137,600	†88,723	266,169			102,483	403,769	370,896	873,492
55-56	275,802	482,654	10,606	106,060	31,507	94,521	136,615	\$136,615	178,728	337,196	454,530	819,850
56-57	290,553	508,468	10,484	104,840	30,865	92,595	154,596	154,576	195,945	352,031	486,498	860,499
57-58	315,432	552,006	9,642	96,420	26,557	79,671	128,570	128,570	164,769	304,661	480,201	856,667
58-59	349,158	611,026	9,176	91,760	27,287	81,861	135,559	135,559	172,022	309,180	521,180	920,206
59-60	366,385	641,173	10,247	102,470	29,486	88,458	140,787	140,787	180,520	331,715	546,906	972,889

\* Estimated

† 10-Day Non-Resident

from any other in Florida. Reports of increased striped activity above the dam are encouraging, and hopes for a larger, more active fishery, are believed to be well founded. If and when sufficient numbers of these fish are established in this general area, additional areas will be selected to be studied for possible stocking.

#### **TABULATION ST. JOHNS DATA**

This F-11-R Project was completed during the biennium, and has now made available a complete and detailed breakdown of results of several years work with haul seines in the St. Johns River. Such data had been recorded on daily and monthly hand written report forms, but now is assembled on statistical data cards for additional future machine analysis.

This is the first such project in Florida, and it leads the way for preserving, assembling, and presenting data from other projects. This technique is sure to be used extensively in future development of fisheries work.

#### **LAKE MANAGEMENT**

Only seldom have we been able to acquire or exert management rights to lakes in Florida without exhaustive preliminary efforts to win public support for such plans. In many instances, certain management recommendations or techniques that are not well known by the general sportfishing public are desired for a lake in order to make better fishing. Because of the full schedule kept by our Regional Biologists, sufficient time or effort is not usually available to devote to such projects. It has become necessary, therefore, to set up the F-12-D Lake Management Project so that definite investigative and treatment plans can be carried out on a regular and continuing basis. Constant checks are required of large waters, and treatments, usually of a chemical nature, are often required within short time intervals.

From this project, therefore, will come a more intensive management plan for our natural waters than has been applied before. It also affords a better balanced Federal-Aid program by allocating some funds to "development" rather than "research." Both are of extreme value

to fishermen of Florida, but, prior to this biennium, no actual development type projects were in operation.

Chemical treatments, based on findings from previous research projects, will be employed extensively in this program as cheaper materials make feasible the management or development of progressively larger bodies of water.

#### **PUBLIC BOAT LAUNCHING RAMP**

One of our most popular projects, the F-13-D Project for installations of boat ramps is designed to assure the rights of fishermen and boaters to access to our public waters. Under this program, access sites are acquired through cooperative agreements with counties, cities, or private land owners, and boat ramps installed for public use. Sites selected are those in selected areas where there is a critical shortage, or complete lack, of public access. Of course, final site selections are dependent upon satisfactory lease or purchase arrangements with the owners.

It is our aim to provide basic space and facilities only, with hopes for future expansion of most sites through cooperative agreements with counties, civic groups, private individuals or other interests. With the

tremendous interest in boating shown during the past few years, this project receives wide public acceptance and needs to be increased as soon as additional funds are available.

A listing of ramps completed under the Federal Aid F-13-D Project is shown below:

1. Dead Lakes—Gulf County
2. Apalachicola River—Ocheese Landing—Calhoun County
3. Buck Lake—Marion County
4. North Bay—Bay County
5. Lake Hart (Moss Park)—Orange County
6. River Styx (White Oak Landing)—Liberty County
7. Orange River—Lee County
8. Hancock Creek—Lee County
9. Ocheese Lake (Shady Grove)—Jackson County
10. Alligator Lake—Columbia County
11. Guano River—St. Johns County
12. Apalachicola River (Iola Landing)—Gulf County

#### **REGIONAL SERVICES**

In each of the Commission's five administrative regions, a Fisheries Biologist is available to investigate reports of pollution and fish-kills, to report on dredging or pumping and filling activities around public lakes, to answer numerous inquiries about fish and fishing, and to make liter-





ally hundreds of checks and recommendations for improving fishing in public fishing waters and farm ponds. Applications for fish from the hatcheries are first processed by the Regional Fisheries Biologists, and then forwarded to the Tallahassee office for approval and referral to the

hatchery personnel. Additional fish for stocking are available from the U. S. Fish & Wildlife Service Hatchery at Welaka.

Stocking fish from the hatcheries consists of bass and bluegills—bass in the spring, bluegills in the fall. Stocking policy requires prior inves-

tigation of ponds or lakes to be stocked, and then if it is believed that stocking would increase or improve fishing, applications for a specific number and kind of fish are approved.

#### FISH RESTORATION PROJECT

One of the two projects in operation that receive funds from legislative appropriations is the Fish Restoration Project. This project allows for additional work on public waters for improving fishing. Management plans for such lakes or streams may call for total or partial renovation of a fish population in an effort to improve fishing conditions. Improved techniques, utilizing some of the newer and more powerful chemical toxicants enables the destruction of many millions of pounds of undesirable fish—particularly shad, without injury to game fish. In lakes or ponds that are determined to be far out of balance, it may be necessary to use methods to destroy all fish life and thus completely renovate the body of water for receiving a complete new fish population in proper ratios of balance for maximum production.

With thousands of lakes in the state, it is apparent that huge sums of money could well be spent in improving fishing. Since Commission funds are necessarily limited, special funds are most welcome and are well utilized in the management and improvement of the state's fishing waters.

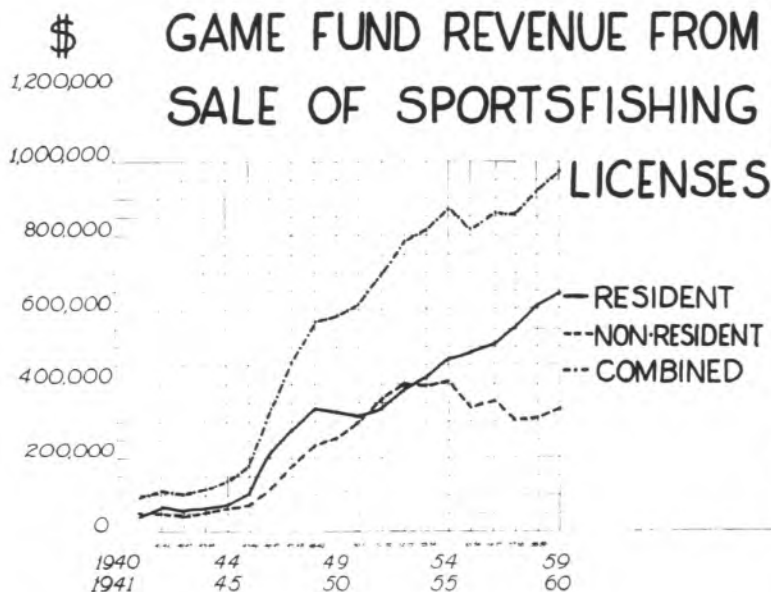
#### NOXIOUS VEGETATION

The noxious vegetation control program is financed in part through a special appropriation from the Florida Legislature. Parts of two separate appropriations, plus about \$100,000 of State Game Fund revenue, were utilized during the biennium.

During the period from July 1, 1958 through June 30, 1960, 301 different bodies of water were treated. This amounted to a total of 50,539 acres of treated vegetation.

To accomplish this immense task, six airboats, three outboard motor units, one full time airplane and ten vehicles were employed by a staff including mechanical, shop, field, and administrative personnel.

A process of screening and testing many of the new chemicals now available for vegetation control purposes was a part of the noxious



vegetation control program during the biennium. Working closely with the manufacturers, various combinations of chemicals were sprayed on different forms of vegetation in an effort to determine the most efficient and economical controls. This screening process has resulted in additional services, as some types of vegetation are now being controlled which formerly were resistant to treatment.

Cost figures show that control of one acre of hyacinths costs about \$6.50. This includes all costs involved in the program. Controls for other types of vegetation generally cost more per acre, as more expensive chemicals are usually required than that needed for hyacinths.

It should be noted that a close working relationship is maintained between this department and similar departments of county, state, and federal agencies. This is particularly true with the U. S. Department of Agriculture Laboratory in Ft. Lauderdale, the U. S. Corps of Engineers, and the Central and Southern Florida Flood Control District.

Enactment of Section 372.93, Florida Statutes, by the 1959 Legislature, enabled expansion of hyacinth control work by entering into cooperative contract with the U. S. Corps of Engineers. This was accomplished in March, 1960.

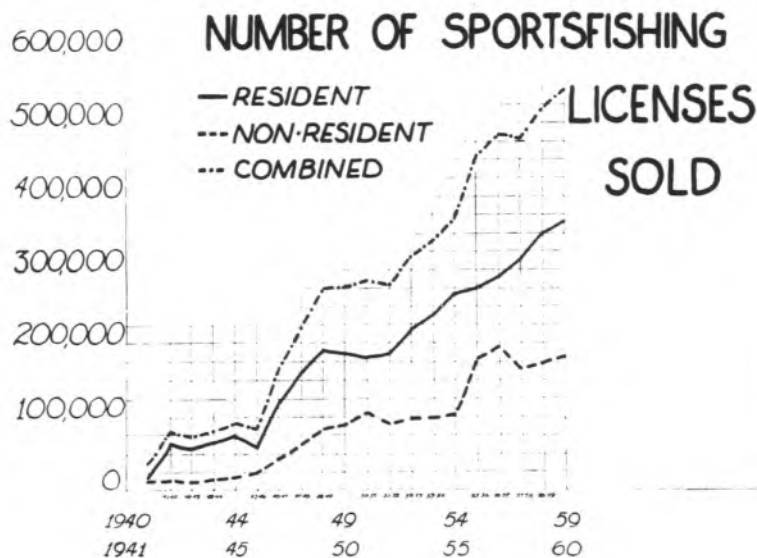
Areas under this program are: Grassy Munson Watershed (Leon County), Bayo Chico (Escambia County), Lynn Haven Lake (Bay County), Lake Talquin (Gadsden and Leon Counties), Myakka River (Sarasota and Manatee Counties), Withlacoochee River (Citrus, Hernando, Marion, Pasco, Polk and Sumter Counties), Oklawaha River Watershed (Putnam, Marion, Alachua, Lake and Orange Counties), Lake Okeechobee Tributaries Watershed (Okeechobee, Glades, and Highlands Counties), Hillsborough River Watershed (Hillsborough County), Upper St. Johns River Watershed (Indian River, Brevard, and Orange Counties), and Apalachicola Watershed (Franklin, Gulf, Liberty, Calhoun, Gadsden, and Jackson Counties).



Areas where additional work is anticipated during the 1961-1963 biennium under the Cooperative Program are: St. Johns, Peace, Kissimmee, Caloosahatchee, and Suwannee

River Watersheds: Lake Okeechobee and the Tamiami Watersheds.

It is hoped that the Cooperative Program will encompass the entire state by June 30, 1963. ●







# GAME MANAGEMENT DIVISION

**T**HE BIENNIAL REPORT covering the fiscal years 1956-57 and 1957-58 outlined a number of administrative changes which were made, and discussed certain new projects which were begun. Activities of the fiscal years 1958-59 and 1959-60 were in accord with these changes. Unfortunately, shortage of funds and lack of personnel caused the curtailment of a number of desired and proposed projects.

Renewal of land agreements in 1958-59 covered property of the Tomoka Land Company in the Tomoka Management Area and of Owens-Illinois Glass Company in the Steinhatchee Area. Agreements were also secured with Atlantic Land Improvement Company covering its land in the Devil's Garden and Lee Areas.

In 1959-60 agreements were made on the Devil's Garden, Lee, Big Cypress, Fisheating Creek, and Okeechobee Areas and added 38,000 acres to the Tomoka Area. Contracts could not be renewed for the Summer-Citrus Area and these lands were dropped from the management area system for the 1959-60 season.

Particular difficulty was experienced during the biennium in attempting to employ technical personnel. This has been due to a shortage of adequately trained and experienced men, but more especially to Florida's salary scale. The situation was particularly acute in 1959-60 with the loss of several key personnel. Mr. D. D. Strode resigned to work for the U. S. Forest Service, Mr. E. L. Tyson to work for the State Board of Health, and Mr. C. M. Loveless to return to school.

Florida was fortunate in that both awards presented at the 1958 meeting of the Southeastern Association of Game and Fish Commissioners went

to members of its game management division. The annual award for the best paper at the preceding meeting was given to Mr. C. M. Loveless and the award for the best publication during the year was given jointly to Mr. J. A. Powell and Mr. John Sincock. In the previous year this same award was won by Mr. R. W. Murray and Dr. O. E. Frye, Jr. Technical Bulletin No. 5, *An Evaluation of White-tailed Deer Habitat in Florida* by Richard Harlow, was published in 1959 and won the Southeastern Section award for best publication. Thus, for three consecutive times Florida won this award, a truly outstanding record.

Important studies and investigations dealt with wildlife resources, habitat changes, and land use in connection with the Central and Southern Florida Flood Control Project; studies of quail, dove, deer, turkey, waterfowl, squirrel, and frog; land management, browse,

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E. B. CHAMBERLAIN, JR.

—Chief—

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population, harvest, and inventory studies. During the period, the game management division engaged in the following investigations cooperatively with other states and agencies: Southeastern Deer Disease Study, Southeastern Statistical Project, Atlantic Waterfowl Council, Site Preparation Studies (one with State Forest Service, one with U. S. Forest Service), U. S. Forest Service Food Plant Study, and Fire Ant Study.

Development and habitat improvement received the major share of the funds. These activities were largely confined to the management areas, and involved food plots, controlled burning, clearing, and maintenance and construction of facilities. Turkey trapping at Fisheating Creek, hunt operations, and fire ant studies were done with state funds. In addition, most personnel were placed on full state salary for 25% of their time due to a lack of Federal Aid funds.

The following tables and project discussions summarize game management division activities during the years 1958-59 and 1959-60.



### W-11-R, Charlotte County Quail Investigation

During 1958-59, project activities involved principally the collection and tabulation of routine data on quail populations, slough grass abundance, age and sex ratios of quail and experimental quail feeders. Unfavorable water conditions interfered with both the fall and spring census. The census indicated a substantial increase in quail throughout the management area. Hunting success on the management area was good, the total kill being the highest experienced to date.

The quail population on Feeder Area 1 remained at a considerably higher level than before the feeders were increased in the spring of 1954. The population on Feeder Area No. 2 remains considerably lower than on Feeder Area No. 1 but considerably higher than on the no-feeder area.

All activities were rather restricted during 1959-60 due to the extended illness of Assistant Leader Allgood and to considerable turnover of other personnel. Mr. Allgood found it necessary to transfer to law enforcement in March. Project As-

sistant Benton resigned in September and was replaced by A. M. Smith in early October. The vacancy created by Mr. Allgood's transfer was filled in June with the employment of Scott Krug as assistant leader.

Both the fall and spring quail census were incomplete. Feeder operation was carried on through the year, though not as consistently as desirable. Quail wings for age determinations were collected during the hunting season.

Hunting on the management area was limited to 17 days because of low success. During this time 461 hunters took 1764 birds for an average of 3.83 quail per hunter.

### W-15-D. Farm Game Habitat Restoration

During the spring of 1959 the following amounts of quail food planting material were distributed to landowners in 44 counties for habitat improvement: 534,000 thunbergii lespedeza plants, 6,550 pounds of partridge pea seed, 6,000 pounds of common lespedeza seed, and 12,619 pounds of combine pea seed. A follow-up evaluation study of plantings



made from material distributed in the spring of 1958 showed the following results:

	Excel-			
	lent	Good	Fair	Poor
Thunbergii lespedeza	16%	36%	40%	8%
Partridge pea	27	31	35	7

Cooperative work with the Soil Conservation Service nursery at Arcadia has given good information on the best methods of planting combine peas. An experimental planting of hardy wild cowpea was made.

Some time was spent in an attempt to get better landowner participation in the wildlife aspects of the Soil Bank program. Prior to 1959 there had been no landowner participation in the wildlife practices on Conservation Reserve land. This year, there are 145.4 acres signed up under wildlife ("G" practice) contracts.

Considerable time was spent in investigating the effects of the Fire Ant Eradication Program upon wildlife in Florida. A research study was drawn up for the purpose of studying the effects of the program upon the endemic biota on treated lands. The Florida Agricultural Experiment Station, the State Plant Board, and the Game and Fresh Water Fish Commission are cooperating in the study. There are three study areas involved; one infested with fire ants that will be treated, one infested with ants that will be untreated, and one area will be uninfested and untreated. Studies will be conducted

**Table 1. Pittman-Robertson Apportionments and Expenditures of Funds During Fiscal Years 1958-59, 1959-60, and 1960-61 with Summary of Projects by Type**

	1958-59		1959-60		1960-61	
	Amount*	%	Amount*	%	Amount*	%
Coordination.....	\$ 25,600.00	6.3	\$ 25,500.00	6.9	\$ 23,300.00	6.4
Research.....	126,700.00	30.9	105,300.00	28.5	104,150.00	28.5
Development.....	257,500.00	62.8	238,600.00	64.6	237,900.00	65.1
Total.....	\$ 409,800.00		\$ 369,400.00		\$ 365,350.00	
Apportionment.....	\$ 234,066.25		\$ 222,612.58			

\* Federal monies with matching State funds. These amounts are planned expenditures.

### SUMMARY OF PROJECTS BY TYPE

	1958-59	1959-60	1960-61
Research.....	8	8	9
Development.....	6	6	6
Coordination.....	1	1	1
Land Acquisition.....	1	1	1

for one year prior to treatment and two years following treatment.

Sampling studies of birds and mammals have been conducted on the three areas. Dr. Henry M. Stevenson of the Zoology Department at Florida State University has been conducting song bird sampling studies. Mr. Ted T. Allen, a graduate student at the University of Florida, conducted small mammal studies last summer using the live-trap method of sampling. The project leader conducted quail and dove call count studies last summer and is continuing with this study this summer. These counts are run at 10-day intervals on each area. A total cen-

sus of the wintering quail population was made on each area last winter. A track count sampling study of larger mammals was begun in August, 1959, and has continued at approximately monthly intervals since.

During the spring and summer of 1960, distribution of 539,000 thunbergii lespedeza plants, 2,000 pounds of partridge pea seed, 5,000 pounds of common lespedeza seed, 15,700 pounds of combine pea seed, and 8,700 pounds of brown-top millet seed were distributed in 39 counties with the cooperation of the Soil Conservation Service.

Follow-up inspections of plantings from material distributed in the

spring of 1959 showed the following results:

	Excel-	lent	Good	Fair	Poor
Thunbergii les-					
pedeza . . . . .	4%	34%	41%	21%	
Partridge pea .	0	47	30	23	

These results are considered generally satisfactory. The low percentage of successful partridge pea plantings was due to a wet summer which prevented satisfactory seed yields. This factor was also responsible for low seed yield on some thunbergii plantings. The majority of combine pea plantings was quite satisfactory. It was learned that the best planting period for this species is from August 1-15 in north Florida, August 15-31 in central Florida, and September 1-15 in south Florida.

**Table 2.** Wildlife Management Areas Operated in 1958-59

	Open to Hunting	Closed to Hunting	Ownership	Location by County
	acres	acres		
1. Eglin Air Force Reservation . . . . .	390,000	70,000	U.S. Air Force . . . . .	Santa Rosa, Walton, Okaloosa
2. Blackwater . . . . .	85,000		Florida Forest Service . . . . .	Santa Rosa, Okaloosa
3. Roy S. Gaskin . . . . .	118,300		Private . . . . .	Gulf, Bay, Calhoun
4. Liberty . . . . .	133,120		U.S. Forest Service . . . . .	Liberty
5. St. Marks . . . . .	3,000	62,000	U.S. Fish & Wildlife Service . . . . .	Wakulla
6. Aucilla . . . . .	110,000		Private . . . . .	Wakulla, Jefferson, Taylor
7. Steinhatchee . . . . .	206,500	18,500	Private . . . . .	Dixie, Lafayette
8. Osceola . . . . .	92,000		U.S. Forest Service . . . . .	Columbia, Baker
9. Lake Butler . . . . .	89,000	7,000	Private . . . . .	Union, Baker, Columbia
10. Little Talbot Island . . . . .		250	Florida Park Service . . . . .	Nassau
11. Gulf Hammock . . . . .	100,000	20,000	Private . . . . .	Levy
12. Ocala . . . . .	203,680	46,280	U.S. Forest Service . . . . .	Marion, Putnam, Lake
13. Tomoka . . . . .	44,000		Private . . . . .	Volusia
14. Sumter-Citrus . . . . .	20,000		Private . . . . .	Sumter, Citrus
15. Farmton . . . . .	60,000		Private . . . . .	Volusia
16. Croom . . . . .	17,000		U.S. Forest Service . . . . .	Hernando
17. Richloam . . . . .	63,000		U.S. Forest Service . . . . .	Hernando, Pasco, Sumter
18. Holopaw . . . . .	23,000		Private . . . . .	Osceola
19. Avon Park . . . . .	108,000		U.S. Air Force . . . . .	Polk, Highlands
20. Okeechobee . . . . .	16,000		Private . . . . .	Okeechobee
21. Fisheating Creek . . . . .	100,000	175,000	Private . . . . .	Glades
22. Cecil M. Webb . . . . .	57,000	5,000	Game & Fish Comm. . . . .	Charlotte
23. J. W. Corbett . . . . .	90,000		Game & Fish Comm. . . . .	Palm Beach
24. Lee . . . . .	40,000		Private . . . . .	Lee
25. Collier . . . . .	300,000	50,000	Private . . . . .	Collier
26. Everglades . . . . .	725,300		Central and Southern Florida Flood Control District . . . . .	Palm Beach, Broward, Dade
27. Woodruff . . . . .	6,000	1,000	U.S. Corps Engineers . . . . .	Jackson
28. Camp Blanding . . . . .	60,000	10,000	State Armory Board . . . . .	Clay
29. Leon-Wakulla . . . . .	67,000		U.S. Forest Service . . . . .	Leon, Wakulla
30. Big Cypress . . . . .	133,000		Private . . . . .	Collier
31. Guano River . . . . .		10,000	Private . . . . .	St. Johns
32. Devil's Garden . . . . .	40,000	18,000	Private . . . . .	Hendry

### W-19-R, Florida Waterfowl Investigation

Without an assigned permanent leader for a ten month period, W-19-R was relatively inactive during 1958-59. Annual mid-winter waterfowl surveys were handled by W-39-R and W-45-D personnel in conjunction with the U. S. Fish and Wildlife Service's annual winter waterfowl survey of Florida.

Since the new leader reported on 20 May 1959, time has been devoted to the familiarization with Florida's wetlands and waterfowl situation. This has been accomplished by reviewing the literature, some of the state and federal management areas, contacting agencies that have and will continue to have direct bearings on the waterfowl habitat situation, and a general familiarization with the topography and vegetation in Florida.

Work during 1959-60 consisted of Florida duck inventories, periodic fall and winter aerial inventories, water quality tests, vegetation analysis, trapping and banding activities, taking waterfowl bag checks, wing collections and investigations concerning possible land acquisitions. Additional activities included tabulation and analysis of population data, preparation of a report concerning exotic waterfowl species introduction in Florida, calculations and tabulations concerning periodic waterfowl surveys, and general waterfowl migration observations. Annual meetings of the Atlantic Water-

fowl Council Research Committee and the Atlantic Waterfowl Council were attended.

Periodic aerial inventories were expanded over northeast, northwest and west coast Florida in addition to south and central Florida. Peak populations of 552,000 waterfowl occurred in January as revealed by the more intensive coverage of the state in the Annual Winter Survey. December waterfowl populations calculated 477,366 waterfowl; February's population, 480,982 waterfowl. Annual Winter Survey results indicated an overall decrease in waterfowl from last year of 29%; dabblers, 46%; divers, 28%; geese, 14%; coot, 15% decreases.

Florida duck breeding ground survey in July tallied 587 birds; 411 adults, 176 young; a 2.3 to 1 adult to juvenile age ratio. The July density was calculated as 4.1 birds per square mile. Fall population was estimated as 27,000 to 30,000 Florida duck from the pre-hunting season survey, probably the highest in the past six years. Waterfowl bag checks indicated a 1 to 7.2 adult to juvenile age ratio. May breeding ground inventories counted 359 Florida duck for a density of 2.6 birds per square mile censused.

#### W-22-R, Mourning Dove Study

Two hundred and thirty-four doves were banded at Alligator Point in 1958 resulting in a 10.7 per cent recovery. The high percentage of immature birds trapped points to a healthy situation in this segment of the population.

Pittman-Robertson personnel participated in the dove call count breeding census, and the information was sent to the regional office in Atlanta. The project leader prepared a report for Director Aldrich recommending a 12 bird bag limit and 5 more days of hunting if the regional call count census shows an increase in population over 1958.

Trapping also continued to be successful in West Palm Beach. Trapping results, through June 1960 are 22,526 new birds banded and a total of 38,101 trapped one or more times. The highest ratio of adult birds ever banded at West Palm Beach occurred in February, 1960, (81.3% adult). This contrasts with 2.2% adults in June, and 4.3% adults in July, 1959.

The project leader attended meet-

ings with the Southeastern dove representatives for future dove studies and for making recommendations to the Southeastern Association for hunting regulations, and the pre-regulation dove meeting in Washington, D. C. Further relaxation of regulations is expected this year.

Machine work on the West Palm Beach banding data was continued at the Leesburg office.

#### W-27-R, Eglin Field Deer Investigation

Activities during 1958-59 included reposting of Eglin Field as necessary, TSI studies at Blackwater, deer disease studies in conjunction with the

University of Florida, and deer trapping. Track counts indicated an October population of 11,500 animals, and a February population of 8,600 animals on Eglin Field.

Principal findings and actions during the year are summarized as follows: Titi, live oak, yaupon, and greenbrier seem to offer the best possibilities of responding to habitat manipulation techniques for increasing available deer browse. Deer are being provided to the University of Florida at Gainesville by the Game and Fresh Water Fish Commission for a study of the sickled erythrocyte condition found on Eglin. The Commission is planning to build two bear

Table 3. Wildlife Management Areas Operated in 1959-60

	Open to Hunting	Closed to Hunting	Ownership	Location by County
	acres	acres		
1. Eglin Air Force Reservation.....	390,000	70,000	U.S. Air Force.....	Santa Rosa, Walton, Okaloosa
2. Blackwater.....	85,000		Florida Forest Service..	Santa Rosa, Okaloosa
3. Roy S. Gaskin.....	118,300		Private.....	Gulf, Bay, Calhoun
4. Liberty.....	133,120		U.S. Forest Service.....	Liberty
5. St. Marks.....	3,000	62,000	U.S. Fish & Wildlife Service.....	Wakulla
6. Aucilla.....	110,000		Private.....	Wakulla, Jefferson, Taylor
7. Steinhatchee.....	206,500	18,500	Private.....	Dixie, Lafayette
8. Osceola.....	92,000		U.S. Forest Service.....	Columbia, Baker
9. Lake Butler.....	89,000	7,000	Private.....	Union, Baker, Columbia
10. Little Talbot Island.....		250	Florida Park Service...	Nassau
11. Gulf Hammock.....	100,000	20,000	Private.....	Levy
12. Ocala.....	203,680	46,280	U.S. Forest Service.....	Marion, Putnam, Lake
13. Tomoka.....	70,000		Private.....	Volusia
14. Citrus.....	41,000		Florida Forest Service..	Citrus
15. Farmton.....	60,000		Private.....	Volusia
16. Croom.....	17,000		Florida Forest Service..	Hernando
17. Richloam.....	63,000		Florida Forest Service..	Hernando, Pasco, Sumter
18. Holopaw.....	23,000		Private.....	Osceola
19. Avon Park.....	108,000		U.S. Air Force.....	Polk, Highlands
20. Okeechobee.....	16,000		Private.....	Okeechobee
21. Fisheating Creek.....	100,000	175,000	Private.....	Glades
22. Cecil M. Webb.....	57,000	5,000	Game & Fish Comm.....	Charlotte
23. J. W. Corbett.....	90,000		Game & Fish Comm.....	Palm Beach
24. Lee.....	40,000		Private.....	Lee
25. Collier.....	300,000	50,000	Private.....	Collier
26. Everglades.....	725,300		Central and Southern Florida Flood Control District.....	Palm Beach, Broward, Dade
27. Apalachee.....	6,000	1,000	U.S. Corps Engineers.....	Jackson
28. Camp Blanding.....	60,000	10,000	State Armory Board.....	Clay
29. Leon-Wakulla.....	67,000		U.S. Forest Service.....	Leon, Wakulla
30. Big Cypress.....	133,000		Private.....	Collier
31. Guano River.....		10,000	Private.....	St. Johns
32. Devil's Gardens.....	40,000		Private.....	Hendry

proof platforms as demonstrations, and to determine costs and best method of handling bee hives on the platforms.

In the 16-day 1959 archery season, 262 hunters killed 12 deer. A total of 6,144 hunters participated in the 32 day gun hunt and reported killing 507 deer. This represents a 10% increase in hunter success. Track counts in February indicated a population of 9,000 deer (one per 51.25 acres) on the area. Data were as-

sembled which led to a trial "no season bag limit" regulation for 1960-61. This should permit better evaluation of the total annual kill.

A turkey management plan involving increased controlled burning, food plots, feeders, and restocking was formulated. Two releases, totaling 17 birds from Fisheating Creek, were made.

#### W-32-R, Ocala Deer Investigation

During the months of July and

August, 1958, approximately 12 days were spent doing the annual track counts along with random track counts of 24 miles of roads. Roads to be used for random roadside counts were selected by giving each mile of road that could be used a number, then selecting at random 24 locations. Counts on all roads indicated 13.99 tracks per mile. August showed an increase over July in tracks per mile.

The 1958-59 kill was 426 legal deer, just over half of the 1957-58 kill. The per cent of deer in the one and one-half year age group also dropped from 56.5 per cent of the total in 1957 to 34.8 per cent in 1958. This decrease in kill and the age groups percentage is directly related to the acorn production two years earlier. Preliminary data indicates that acorn production is directly related to the fawn production, kill and weight of deer.

E. L. Tyson resigned as project leader in July 1959, and comparatively little work was done on the project until Richard Harlow was assigned as leader in January, 1960. Activities carried out by Mr. Harlow include studies of habitat, controlled burning, brush cutting, population, fertilization of oak trees, and acorn production.

The combined 1959 scrub oak acorn crop (*Quercus myrtifolia*, *Q. geminata* and *Q. Chapmani*) was slightly above the nine year average. When compared individually, however, *Q. Chapmani* was considerably below the average while *Q. geminata* and *Q. myrtifolia* were only slightly below. Compared comparatively over the nine year study, it may be considered a normal crop.

The oak tree fertilizer experiment is progressing as planned, and the effect of fertilizer on the acorn crop will be studied for the first time during the 1960-61 fall and winter.

In the oak tree orchard study where 15 trees per acre were left, the traps collected the greatest number of acorns per tree and contained the smallest per cent of unsound acorns. Further study is necessary before any definite conclusions can be reached. The ground vegetation survey taken during January in the treated areas showed the greatest quantity in plant coverage on those areas where oaks were thinned out.

**Table 4.** Summary of Active Pittman-Robertson Projects Operated in 1958-59

Project	Name	Purpose	Estimated Total Cost
W-8-I	Charlotte County Game Management Area Acquisition	Exchange of land to consolidate Commission holdings	\$ None
W-11-R	Charlotte County Quail Investigation	To study ecology of South Florida quail	9,200.00
W-13-C	Wildlife Management Coordination	To administer and supervise program	25,200.00
W-15-D	Habitat Restoration for Farm Game	To improve quail habitat	14,950.00
W-19-R	Florida Waterfowl Survey	To study waterfowl ecology	5,000.00
W-22-R	Mourning Dove Study	To study dove populations and migrations	5,500.00
W-27-R	Eglin Field Deer Investigation	To study deer populations and management	4,600.00
W-32-R	Ocala Deer Investigation	To study deer populations and management	8,000.00
W-33-R	Wildlife Inventory, Harvest and Economic Survey	To learn statewide harvest and hunting pressures	21,200.00
W-35-D	North Florida Management Area Development	To develop management areas in north and central Florida	100,000.00
W-39-R	Wildlife Investigation of the Central and Southern Florida Flood Control Project	To develop management and operational methods	21,000.00
W-41-R	Management Area Research	To study game populations and make management recommendations	245,000.00
W-43-D	Wildlife Development of the Central and Southern Florida Flood Control Project	To develop Everglades Area	11,400.00
W-45-D	South Florida Management Area Development	To develop management areas in South Florida	60,000.00
W-46-D	Woodruff Reservoir Development	To develop management area	26,000.00
W-47-D	Guano River Development	To develop a waterfowl management area through construction of dike and water control structures	12,500.00
			\$349,050.00

#### PERSONNEL

Full time technicians	19	Bookkeeper	1
Part time technicians	1	Secretarial	2
Full time non-technical	21	Half time secretarial	1
Part time non-technical	7		



The increase in plant quantity was due almost entirely to wiregrass and *Andropogon*.

The controlled burning studies on longleaf pine islands in one, two, three, and four year old burns indicated that one year old burns contained the greatest quantity and variety of quail and deer foods, with the two year old burns contributing the next greatest quantity and variety of plants. By the third year, old wiregrass (duff) and new wiregrass dominates the ground vegetation. Burning every two years (if enough duff and dry plant life is present) would be most suitable for quail, while for deer every third or fourth year would produce the best results.

#### **W-33-R, Wildlife Inventory, Harvest and Economic Survey**

Throughout the biennium, operations of this project have been restricted because of recumment illness of the project leader. Fortunately, all routine activities have been fully carried out. The 1957-58 Random Survey and Permanent Mailing List were completed and reported in the January, 1959, quarterly report. A series of sub-samples were analyzed by the former project leader, who resigned to continue his education.

The 1958-59 Random Survey was completed and tabulated. The Permanent Mailing List was discontinued for statistical and economic reasons. The 1958-59 Management Area Survey was completed and tabulated.

The 1958-59 managed hunt data were collected, tabulated and reported in the Annual Report for Project W-41-R.

The project requested the North Carolina State Statistical Laboratory to furnish a proposal and cost estimates for determining certain facts, such as harvest, hunting pressure, utilization, hunter opinions and economic importance for the entire state and/or management areas, on an annual and 5-year basis.

A 650 program for analyzation of the road block sampling data was received from the North Carolina State Statistical Laboratory and is described in this report. The economic data collected in conjunction with the 1957-58 Random Survey were tabulated and reported in the January '59 quarterly report.

A special opinion survey was conducted in regard to opening the Inverness Refuge. Results of this

survey, which favored opening of the area, were reported in the October, 1958, quarterly report.

In other activities, dove banding data and quail census data were processed, and work was also done on the fire ant study. The project leader attended the workshop of the Cooperative Statistical Study at the North Carolina State Statistical

Laboratory.

On the 1959 Random Survey Questionnaire, the question "Would you favor a limited 'any sex' deer season on specified areas when and if the Commission determines such a season necessary to good deer management?", was asked. A tabulation of the answers to this question is presented in Table 6.

**Table 5.** Summary of Active Pittman-Robertson Projects Operated in 1959-60

Project	Name	Purpose	Es imated Total Cost
W- 8-I	Charlotte County Game Management Area Acquisition	Exchange of land to consolidate Commission holdings	\$ None
W-11-R	Charlotte County Quail Investigation	To study ecology of South Florida quail	5,000.00
W-13-C	Wildlife Management Coordination	To administer and supervise program	24,500.00
W-15-D	Habitat Restoration for Farm Game	To improve quail habitat	11,000.00
W-19-R	Florida Waterfowl Survey	To study waterfowl ecology	6,500.00
W-22-R	Mourning Dove Study	To study dove populations and migrations	5,000.00
W-27-R	Eglin Field Deer Investigation	To study deer populations and management	6,300.00
W-32-R	Ocala Deer Investigation	To study deer populations and management	2,800.00
W-33-R	Wildlife Inventory, Harvest and Economic Survey	To learn statewide harvest and hunting pressures	19,000.00
W-35-D	North Florida Management Area Development	To develop management areas in north and central Florida	93,000.00
W-39-R	Wildlife Investigation of the Central and Southern Florida Flood Control Project	To development management and operational methods	26,000.00
W-41-R	Management Area Research	To study game populations and make management recommendations	17,000.00
W-43-D	Wildlife Development of the Central and Southern Florida Flood Control Project	To develop Everglades Area	8,000.00
W-45-D	South Florida Management Area Development	To develop management areas in South Florida	75,000.00
W-46-D	Woodruff Reservoir Development	To develop management area	13,000.00
W-47-D	Guano River Development	To develop a waterfowl management area through construction of dike and water control structures	17,000.00
FW-1-R	Cooperative Statistical Project	Statistical aid in research projects by the Institute of Statistics at North Carolina State College	1,300.00
			<b>\$330,400.00</b>

#### **PERSONNEL**

Full time technicians	18	Bookkeeper	1
Part time technicians	1	Secretarial	2
Full time non-technical	23	Half time secretarial	1
Part time non-technical	2		



#### W-35-D, North Florida Management Area Development

During the year 1958-59, work plans were adhered to. The TD-18 repaired and maintained approximately 23 miles of roads on the Richloam, Sumter and Gulf Hammock areas. Project personnel repaired and maintained boundary fences on the Gulf Hammock, Steinhatchee, Aucilla, Tomoka and Lake Butler Areas, while food plot fences were put up or repaired on 32 plots on the Richloam, Citrus, Camp Blanding, Steinhatchee and Aucilla areas. Posting of boundary line was carried out on the Gulf Hammock, Richloam, Citrus, Farmton, Lake Butler, Camp Blanding, Steinhatchee and Aucilla areas. Twelve new gates were built, and seven old gates were built or repaired on the Gulf Hammock, Farmton, Tomoka, Steinhatchee and Aucilla areas. Checking stations

were repaired or painted on the Richloam, Farmton, Tomoka, Aucilla and St. Marks areas, an equipment shed was started on the St. Marks area, and the shed on Lake Butler was maintained by painting. Four bridges were built on the Richloam, Tomoka and Aucilla areas. Painting of boundary posts was completed on the Citrus area, and almost completed on the Aucilla area. At total of 445 miles of fire lanes was plowed on the Farmton and Tomoka areas, and approximately 3,200 acres were control burned on the Farmton, Tomoka, Gaskin and Camp Blanding areas. One hundred seventy food plots were planted, limed or fertilized or both, and planted in combine pea, chufa, sweet suden, burnet, or grasses on all of the management areas.

In 1959-60, current work plans were practically completed on all

areas. Weather and maintenance of equipment delayed some development and road work. Excessively heavy rains throughout the first quarter hampered field operations on all management areas. During the second quarter, personnel on all management areas were primarily concerned with preparation for and operation of the annual controlled hunts. In addition, fall planting of oats, wheat, buckwheat and rye were completed on 34 plots, totaling approximately 100 acres on the Citrus, Croom, Farmton, Lake Butler, and St. Marks areas.

On most management areas, the early part of the third quarter was devoted to closing of the annual hunts and in cleaning and storage of hunt equipment. The project leader and several of the project personnel conducted turkey trapping operations in Pinellas County, where 44 birds were caught and moved to various management areas. The project leader was also involved in the release of Iranian pheasant, and in attending watershed meetings concerning the Green Swamp and the Upper Josephine-Jackson Creek areas. During the remainder of the quarter, most of the management areas were involved with routine maintenance of facilities, and with spring planting operations.

During the course of the year, project personnel built one new bridge and repaired two bridges on the Tomoka and Gulf Hammock areas. Approximately 100 miles of road were maintained on the Gulf Hammock, Tomoka, Farmton and Aucilla areas. Boundary fences were checked and repaired on the Gulf Hammock, Tomoka, Lake Butler, Steinhatchee and Aucilla areas. Two new and 26 old food plot fences were erected or maintained on the Richloam, Croom, Gulf Hammock, Farmton, Lake Butler, and Aucilla areas. Boundaries of all areas were checked for replacement of small posted signs. Forty-eight signs were routed by Camp Blanding project personnel and distributed to the various areas. Painting of posts for boundary identification was carried out on the Tomoka and Aucilla areas. Approximately 225 food plots were planted, fertilized, mowed and maintained in Pensacola bahia, combine pea and chufas on the Richloam, Citrus, Gulf Hammock, Farmton,

**Table 6.** Tabulation of Returns, Opinion Question on "Any Sex" Deer Season

District	Total Usable Returns	Total Yes	Per Cent Yes	Total No	Per Cent No	Total Indifferent	Per Cent Indifferent
I	718	477	66.4	140	19.5	101	14.1
II	650	405	62.3	154	23.7	91	14.0
III	683	355	52.0	188	27.5	140	20.5
IV	741	461	62.2	158	21.3	122	16.5
V	663	453	68.3	128	19.3	82	12.4
Total	3455	2151	62.3	768	22.2	536	15.5

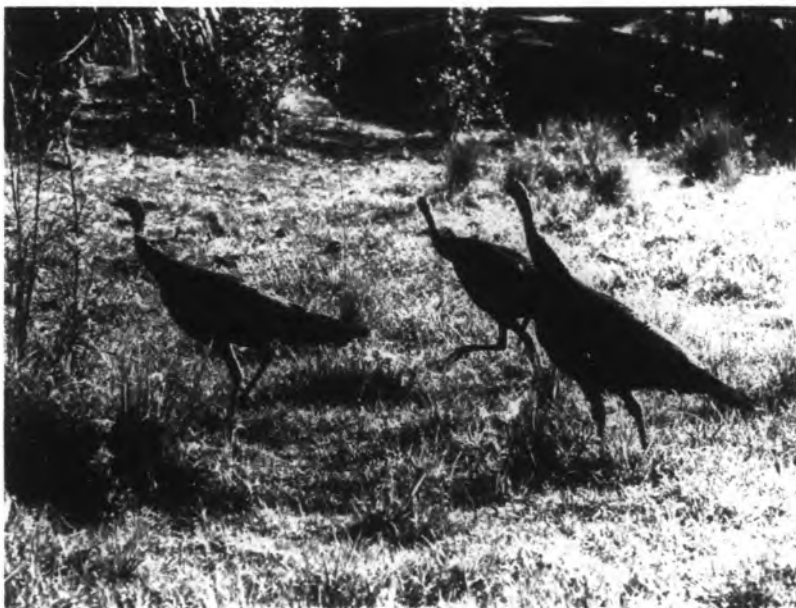
Camp Blanding, Steinhatchee, Gas-kin and Blackwater areas. Twenty turkey feeders were maintained on the Richloam, Croom, Citrus, Gulf Hammock, and Lake Butler areas, and 125 quail feeders were maintained on the Camp Blanding, Croom and Blackwater areas.

One new equipment shed was built on the Farmton Area, and other equipment sheds were painted or maintained on the Gulf Hammock, Lake Butler, Camp Blanding and Aucilla areas. Checking stations were repaired and maintained on the Steinhatchee, Aucilla and St. Marks areas. Ten new gates and 26 existing gates were built and repaired on the Gulf Hammock, Steinhatchee and Aucilla areas.

#### **W-39-R, Wildlife Investigation of the Central and Southern Florida Flood Control Project**

During the biennium, liaison was maintained with the Central and Southern Florida Flood Control District, Corps of Engineers, Fish and Wildlife Service, Soil Conservation Service, U. S. Geological Survey, Agricultural Research Service, Trustees of the Internal Improvement Fund, Department of Conservation, State Land Use and Control Commission, Florida Development Commission, other branches of the Game and Fresh Water Fish Commission, Florida Wildlife Federation, and various organized and unorganized groups.

One particularly difficult problem has been the continued construction of camp buildings by trespassers in Areas 2 and 3. In addition to other factors, it was found by the Broward and Dade County Health Departments that these camps constituted a potential health menace and should not be condoned. Consideration was given to the transfer of all camps to a central location in order to expedite administration and perhaps facilitate the meeting of health requirements as required by the state sanitary code. After post project water conditions were described, and after costs for the necessary fill were estimated, it became apparent that such a plan was not feasible. As a result, at the May 16 official meeting of the Commission, a resolution was passed which directed that all camps within the two conservation areas must be removed.



During 1958-59, a cooperative program with the Florida Trustees of the Internal Improvement Fund was formulated regarding fresh water lake bottoms and shorelines. In essence, all applications received by the Trustees' office requesting dredging or filling or otherwise altering of these lake bottoms and shorelines would be referred to our Commission for review before final action was taken. This program has proceeded smoothly, and during the past six months fourteen applications were received, field inspections made and recommendations given.

Deer and waterfowl harvest was low during 1958-59 as compared with other periods. In the case of deer, it was occasioned by a reduced herd as a result of high water in 1957-58. The deer harvest was estimated to be about 350 legal bucks for 3,500 man-days of hunting.

Mr. C. M. Loveless resigned from the project in September to return to school and was replaced by Mr. Norman F. Schlaack, Jr. Mr. Wm. Ware was called to active duty with the U. S. Navy in June and was given a 90-day leave of absence.

Four years of deer investigation by Mr. Loveless resulted in the publication of a 104-page Technical Bulletin No. 6 by the Game and Fresh Water Fish Commission titled "The Everglades Deer Herd Life History and Management." Mr. Schlaack prepared a comprehensive report

titled "Waterfowl in the Everglades Wildlife Management Area," which was a compilation of data accumulated by project personnel during the past five years. Mr. Ligas prepared a comprehensive report titled "The Everglades Bullfrog Life History and Management" which documents findings resulting from a five year study of this resource.

It was estimated that 75% of the Everglades Management Area was flooded and made unsuitable for deer during the past summer and fall. The deer population for the management area in December, 1959, was believed to total not more than 1,000. High water resulted in overbrowsing and subsequent starvation, and dead deer were found on most of the islands in the north end of Area 3. It was estimated that 50% to 75% of the 1959 fawn crop was lost. Sixteen deer jaws obtained from dead deer showed that few adult deer died. Twelve of the 16 dead deer were nine months old, or younger, two were 18 months of age and two were two years old.

The weights and measurements of 38 bucks and two doe deer were obtained during the past deer season. Computed live weights (based on dressed weights) showed that the average weight was 117.5 pounds, which compared with 118.3 pounds for the 1957-58 season and 111.9 pounds for the 1958-59 season.

Five aerial waterfowl censuses



**Table 7. Estimated Number of Resident Licensed Hunters of Each Species During the 1958-59 Hunting Season as Determined by the Post-Season Random Mail Survey.**

Species	DISTRICT					State Total
	I	II	III	IV	V	
Deer.....	11,000	13,000	11,200	9,000	15,300	59,500
Turkey.....	9,700	5,600	8,200	5,300	7,500	36,300
Quail.....	17,600	13,500	14,000	9,100	13,700	67,900
Squirrel.....	18,000	18,800	25,400	4,400	18,100	84,700
Dove (Early).....	11,800	9,000	13,400	10,000	8,400	52,600
Dove (Late).....	10,400	8,200	8,300	6,700	6,700	92,900
Duck.....	7,700	5,800	7,800	6,900	11,300	39,500
Coot.....	1,600	1,500	1,500	2,700	5,500	12,800
Goose.....	300	600	1,500	200	400	3,000
Marsh Hen.....	1,200	1,500	900	1,500	1,000	6,100
Snipe.....	4,000	1,700	1,800	3,800	2,600	13,900
Number of Licenses..	35,100	30,500	38,500	21,100	33,700	158,900

**Table 8. Estimated Total Man-Days of Hunting Pressure Expended for Each Species by Resident Licensed Hunters During the 1958-59 Hunting Season, as Determined by the Post-Season Random Mail Survey.**

Species	DISTRICT					State Total
	I	II	III	IV	V	
Deer.....	68,700	78,000	54,900	48,300	92,300	342,200
Turkey.....	49,700	28,000	41,100	25,300	44,500	188,600
Quail.....	132,100	103,400	113,700	72,500	92,900	514,600
Squirrel.....	95,200	141,000	190,800	20,000	118,400	565,400
Dove (Early).....	71,800	44,500	71,900	70,300	43,000	301,500
Dove (Late).....	58,100	44,700	37,400	41,800	31,800	213,800
Dove (Total).....	129,900	89,200	109,300	112,100	74,800	515,300
Duck.....	32,000	31,800	43,800	39,500	66,200	213,300
Coot.....	4,400	5,000	7,500	12,700	30,400	60,000
Goose.....	500	1,300	5,100	500	2,400	9,800
Marsh Hen.....	3,200	4,600	2,800	7,200	2,900	20,700
Snipe.....	11,000	4,800	11,000	12,000	7,600	46,400

**Table 9. Estimated Total Kill of Each Species by Resident Licensed Hunters During the 1958-59 Hunting Season, as Determined by the Post Season Random Mail Survey.**

Species	DISTRICT					State Total
	I	II	III	IV	V	
Deer.....	2,000	3,000	2,700	2,400	3,600	13,700
Turkey.....	6,300	2,100	5,400	2,200	4,800	20,800
Quail.....	515,500	354,600	390,000	262,900	328,700	1,851,700
Squirrel.....	261,200	397,000	454,900	38,600	336,100	1,487,800
Dove (Early).....	270,700	179,800	277,200	283,600	163,900	1,175,200
Dove (Late).....	229,700	164,600	153,900	165,900	119,100	833,200
Dove (Total).....	500,400	344,400	431,100	449,500	283,000	2,008,400
Duck.....	60,700	53,300	75,300	78,700	132,900	400,900
Coot.....	18,100	18,700	11,700	25,100	86,600	160,200
Goose.....	300	200	700	000	300	1,500
Marsh Hen.....	4,900	25,400	5,100	10,300	8,600	54,300
Snipe.....	33,700	10,100	11,200	37,300	23,000	115,300

conducted during the winter months revealed that greater numbers of waterfowl were present than during 1958-59, with coots being the dominant species. Blue-winged teal and ring-necked ducks showed a considerable increase.

The 1959-60 harvest of waterfowl in the conservation areas was estimated to be 200 ducks and 300 coots. Deer and hog hunting took place in the Everglades only during the last two weekends of the year, because of high water conditions. The estimated kill for Areas 2 and 3 was 100 deer and 50 hogs.

Continued high water thinned out extensive sawgrass stands and increased the amount of white water-lily, spatterdock, pickerel weed and sagittaria. Certain desirable duck foods, such as curly pondweed, naias and vallisneria, increased in both Areas 2 and 3.

A coordinated water control plan was put into effect in Conservation Area 2 by the Central and Southern Florida Flood Control District, Corps of Engineers and the Commission in an effort to maintain minimum water levels to preserve the existing outstanding fishery.

Engineering plans were completed for the interior levee and its appurtenant structures in Conservation Area 2, and construction commenced. A number of construction features were incorporated in the final design to meet the needs of the game and fish management program, and to provide for future recreational facilities at a cost approaching one quarter million dollars. Similar work by project personnel has resulted in action by the Corps of Engineers and C&SFFCD to provide similar recreational facilities on other areas. This is felt to be an outstanding accomplishment.

#### W-41-R, Management Area Research

During 1958-59, work was carried on in all phases of this study. All jobs were discussed in the annual report with the exception of the investigations in natural food plots in cypress swamps and hydric hammocks. Due to pressures of other activities, the only work done on this phase was to select sites for the various study areas.

Deer track counts were conducted



on those management areas where this census technique is applicable. Sight observations and poult counts indicated very poor turkey hatching success in the spring of 1958, and the analysis of the sex and age ratios of the turkey harvest and the turkeys taken during the past trapping season verified these estimates. While it is well established that at the present turkey population census methods are inadequate, it is felt that with careful observation of spring precipitation, coupled with field observations and poult counts, a trend can be predicted, or at least observed, while it is taking place.

Examination of 423 deer stomach samples showed that mushrooms and deer's-tongue were among the ten most preferred foods over the six year study. Saw palmetto berries, gallberry leaves and twigs and berries, Virginia willow leaves and twigs, bamboo briar leaves and vines and berries, and black titi leaves and twigs occurred in the preferred list five times during the six year study. Some species of acorns occurred among the first ten preferred foods throughout the study.

The large number and variety of food items taken indicates that the wild turkey is quite omnivorous, opportunistic, and ready to take advantage of almost any potential food item that might present itself. Therefore, the occurrence of large quantities of a given item in turkey crops one year is not necessarily evidence that the item is a preferred food. Important foods were acorns, cabbage, palm berries, green vegetation, grasshoppers, chufas, wax myrtle, black gum, cypress, pine seed, carpet grass, panic grass, and *Ilex glabra*.

The most valuable habitat for both deer and turkey in the Collier Management Area is the cabbage palm-pine hammock. However, the amount of this habitat is limited. The greater portion of the Collier Wildlife Management Area is covered by cypress swamp. The margins of the cypress swamp and the transition zones where it meets pine-palmetto flatwoods are of much greater value than the interiors of large cypress strands. Therefore, the value of an extensive cypress area as deer and turkey habitat depends largely upon the degree to which it is interspersed with islands of pine-palmetto flat-

**Table 10. Estimated Number of Resident Licensed Hunters of Each Species During the 1959-60 Hunting Season as Determined by the Post-Season Random Mail Survey.**

Species	DISTRICT					State Total
	I	II	III	IV	V	
Deer.....	11,200	13,100	10,600	7,400	15,800	58,100
Turkey.....	10,500	5,500	7,500	4,400	6,900	34,800
Quail.....	17,000	13,400	15,500	8,300	15,000	69,200
Squirrel.....	14,900	20,300	25,900	3,300	18,000	82,400
Dove (Early).....	10,300	8,700	13,500	8,000	8,600	49,100
Dove (Late).....	9,400	8,300	9,900	5,400	8,000	41,000
Duck.....	4,300	4,600	6,700	4,600	6,600	26,800
Coot.....	1,100	1,200	1,200	1,400	2,500	7,400
Goose.....	200	400	1,100	200	600	2,500
Marsh Hen.....	900	900	700	1,100	1,300	4,900
Snipe.....	3,000	1,500	1,800	1,900	1,700	9,900
Bear.....	600	700	100	400	1,200	3,000
Number of Licenses.....	33,900	31,300	38,700	19,000	35,200	158,100

**Table 11. Estimated Total Man-Days of Hunting Pressure Expended for Each Species by Resident Licensed Hunters During the 1959-60 Hunting Season, as Determined by the Post-Season Random Mail Survey.**

Species	DISTRICT					State Total
	I	II	III	IV	V	
Deer.....	78,000	105,000	77,600	46,300	148,100	455,000
Turkey.....	51,300	35,000	41,600	22,900	42,200	193,000
Quail.....	164,500	90,900	128,700	55,600	112,100	551,800
Squirrel.....	90,300	129,500	205,200	12,000	118,400	555,400
Dove (Early).....	46,700	42,000	64,400	42,600	44,800	240,800
Dove (Late).....	44,600	43,000	48,700	29,300	42,000	207,600
Dove (Total).....	91,300	85,000	113,100	71,900	86,800	448,100
Duck.....	15,200	23,100	36,000	21,100	35,900	131,300
Coot.....	4,200	3,100	6,600	6,000	9,200	29,100
Goose.....	400	1,200	3,800	400	2,000	7,800
Marsh Hen.....	2,300	2,300	1,200	4,200	3,800	13,800
Snipe.....	7,700	3,200	4,900	6,400	6,500	28,700
Bear.....	21,000	4,500	200	1,600	8,300	16,700

**Table 12. Estimated Total Kill of Each Species by Resident Licensed Hunters During the 1959-60 Hunting Season as Determined by the Post-Season Random Mail Survey.**

Species	DISTRICT					State Total
	I	II	III	IV	V	
Deer.....	1,200	3,000	1,800	2,200	3,900	12,100
Turkey.....	5,800	3,400	4,100	3,000	4,300	20,600
Quail.....	566,900	365,500	368,300	159,800	357,800	1,818,300
Squirrel.....	239,900	356,800	489,200	31,000	302,700	1,419,600
Dove (Early).....	167,900	190,700	247,300	149,500	146,400	901,800
Dove (Late).....	182,000	187,200	187,200	101,800	138,300	796,500
Dove (Total).....	349,900	377,900	434,500	251,300	284,700	1,698,300
Duck.....	30,800	33,400	52,400	34,400	60,700	211,700
Coot.....	7,000	9,800	11,800	9,600	21,500	59,700
Goose.....	100	300	1,300	200	500	2,400
Marsh Hen.....	4,500	9,200	2,400	8,600	11,200	35,900
Snipe.....	31,300	7,800	6,700	19,800	18,400	84,000



woods or cabbage palm-pine hammocks.

Study plots have been established within the "Corkscrew Swamp Sanctuary" to study the effects of burning and grazing in this type of habitat. Plant species as well as abundance was recorded.

Wildlife habitat recommendations were formulated for the three ranger districts in the Apalachicola National Forest. Considerable work was done in pine site preparation areas in the Leon District.

The University of Florida and the University of Georgia coordinated their efforts on the deer disease study in 1959-60. A similarity between the abnormal hemoglobin in deer and humans has prompted the U. S. Health Service to contribute to the investigation. The outbreak of cattle tick fever has stimulated investigation into means of control other than the killing of deer in the area of occurrence.

Gobbling counts in the Collier Area indicated that a higher and more constant population of turkeys was present in the feeder area than in the check area. The improved design of feeders minimized feeder

losses and maintained a source of food during periods of scarcity. This type of operation can be of definite value to turkey populations in marginal habitat in south Florida and other parts of the state where food supply is a limiting factor.

#### **W-43-D, Wildlife Development of the Central and Southern Florida Flood Control Project**

During 1958-59, project activities closely followed the approved work plan. Mr. Ware and Mr. Cone devoted the major portion of their time to the job assignments, and also assisted W-39-R personnel in collecting hunt season data and in other activities. In May, Mr. Cone resigned. Two additional temporary employees were hired in June. These personnel will devote their full time to boat trail construction in Conservation Area 2.

The total length of boat trails cut in the southern portion of Conservation Area 2 was approximately 15 miles. These trails were widened, straightened, and open channels maintained through water hyacinth and other vegetation. Eight large 4'x4' management area access signs

were built and lettered. The management area boundaries were rechecked throughout the year, and signs replaced as required.

Approximately 7,300 gallons of herbicide mixture were used during the year for the control of water hyacinth and alligator weed. Maintenance was performed on 10 major items of equipment which included three airboats, four vehicles, an Oliver tractor, a swamp buggy, and the Rotary Marsh Digger. Miscellaneous other items such as power spray unit and attachments, outboard motor, and trailers were maintained. One portable checking station was also constructed.

The Rotary Marsh Digger was used extensively during the first half of the year 1959-60 because of unusually favorable water level conditions. By July, 1960, approximately 40 miles of trails had been cut and improved in the southern portion of Area 2.

Approximately 20 miles of boundary were posted along the Tamiami Trail at the south end of Area 3. A number of large management area signs was constructed and erected at the major access points. Approximately 250 gallons of 2,4-D were used to control hyacinths along the shore line of Area 2 to permit access for canepole fishermen.

#### **W-45-D, South Florida Management Area Development**

During 1958-59, all areas were visited periodically and all project personnel were contacted regarding general administration, job completion schedules and preparation for and operation of the public hunts on the management areas. The project leader met with landowners of the Corbett, Devil's Garden, Fisheating Creek, Lee, Collier, Avon Park and Okeechobee management areas.

There were five checking stations moved to new locations on south Florida management areas and 25 check stations were maintained. There were 608 quail feeders and 20 turkey feeders maintained and operated on south Florida management areas during this period and approximately 117,500 acres underwent controlled burning. Approximately 250 acres of food plots have been planted and fertilized on these areas and all showed excellent utilization by game.

On the J. W. Corbett area, the south boundary fence and the grade were completed, fulfilling this part of the obligation of the Pratt-Whitney Corporation. There were 178 wild cows removed from the Commission-owned land in the Corbett Area, and the Palm Beach Wildlife Conservation League released 16 Wisconsin deer there. There were 192 turkeys trapped from the Fish-eating Creek and Highlands areas and released for restocking purposes throughout the State. On the Cecil M. Webb area, there is an estimated 76,500 cubic yards of shell material stockpiled, and in addition about 20,000 yards have been sold. Fence repair and spot posting on the perimeter fences of all south Florida management areas has been accomplished where necessary.

The project leader and Assistant Leader Jones, in 1959-60, vacated the Lantana office and set up office operations in the new regional office building, built by the Commission in West Palm Beach, and a branch project office was established on the Avon Park Management Area in a building leased from the U. S. Air Force.

Considerable time was spent by the project leader supervising a special cooperative project between the Fort Myers Rod and Gun Club and the Game and Fresh Water Fish Commission. During the month of October, 80 dog kennels and 24 covered horse stables were constructed on the Cecil M. Webb Wildlife Management Area field trial grounds, and, in November, the Fort Myers Rod and Gun Club utilized these facilities in sponsoring the first annual all-Southern Field Trial.

The turkey trapping season netted 176 turkeys that were distributed on the various management areas. Eight turkeys were flown to Texas for a deer trade.

There were 24 checking stations maintained and operated on south Florida management areas. Approximately 230 acres of food plots were planted and maintained. There were 607 quail feeders and 24 turkey feeders maintained, and approximately 100,000 acres underwent controlled burning.

An aerial fertilization experiment was tried on the J. W. Corbett Area. Fence repair and spot posting on the



perimeter fences of all south Florida management areas has been accomplished where necessary.

#### **W-46-D. Woodruff Reservoir Development**

Following water draw-down operations the previous year, approximately 20 acres of Jap millet were planted in one of the subimpoundment areas in 1958-59. Growth and seed production was quite satisfactory. This planting was inundated from a depth of 0-12 inches during the first half of November. Smartweed was seeded in this subimpoundment in June of this year, immediately following water draw-down. However, there was little germination of the seed, although they were sacrificed before planting.

The establishment of plantings for geese and upland game has consisted of planting agricultural crops through cropping leases and share crop agreements with farmers. Approximately 440 acres were leased for such cropping last year, and 320 acres in 1958-59. Under share crop agreements, the cropper leaves half the crop of corn in the field unharvested, and plants oats or rye on the land from which he removes his half.

The corn which is left unharvested is knocked down with a rotary mower.

A dwelling for the project assistant, and an equipment shed, were constructed on the area during the year.

Earth plugs with 36-inch culvert pipes equipped with sliding head-gates were installed in two ditches for the purpose of water level control in subimpoundments. The shore line of these subimpoundments will be planted to chufas and Jap millet. Valves in the pipes will be closed in the fall to permit inundation of the plantings.

The hunt on the area in the 1958-59 season was quite successful. There was a total kill of 1,271 ducks, 22 coots, 360 quail, 74 squirrels, 80 doves, and 22 snipe. Between 5,000 and 6,000 ducks and 150 to 200 geese wintered on the area.

The sides of two dams that were placed in drainage ditches were sand-bagged in 1959-60 to prevent blowing out in times of high water. Some tributary ditching was done in order to permit water level control in subimpoundments within the management area. The three major impoundment areas are now con-





nected with ditches.

Approximately 20 acres of Jap millet were planted on the area for ducks. A 10-acre island field of fescue grass and ladino clover was planted for geese in the fall of 1959. In addition to this, there were approximately 60 acres of oats and corn available as goose pasturage. Apparently due to the limited number of wintering birds on the area, all waterfowl food plantings were utilized only slightly. There were only about 50 geese on the area, and 1,000-2,000 ducks. Approximately 1,000 acres of land were controlled burned during February and March for upland game habitat improvement. Approximately 400 acres of agricultural crops were planted in 1959-60 through cropping leases and share crop agreements with farmers. Approximately 100 acres of cattails have been sprayed with Dowpon. This plant threatens to take all shallow water areas within the management area.

Hunting success on the area in 1959-60 was poor, due to a low wintering duck population. Game killed consisted of 239 ducks, 36 coots, 242

quail, 114 doves, 35 squirrel, and 15 snipe. Geese, turkey, and deer are protected.

Two duck traps were constructed and set on the area following hunting season. Eighty-four ringnecks were trapped, banded, sexed, and released.

Twenty wild trapped Canada geese were obtained from St. Marks Refuge in March, pinioned, and released in the island enclosure to serve as decoys in attracting wild flocks. Six of these birds died shortly after being released due to paralysis developed while being penned at St. Marks.

#### **W-47-D. Guano River Development**

Since the completion of the 1700 foot earth dam and control structure in mid-April of 1957, over 2,200 acres of potentially excellent waterfowl habitat have been created. Stabilized water levels and the freshening of the water in the past year has reduced vast areas of undesirable saline aquatic plants as cordgrass (*Spartina alterniflora*; *S. patens*), black needlerush (*Juncus roemerianus*) and saltgrass (*Distichlis spicata*) creating openings for more de-

sirable waterfowl food plants. The area will be managed essentially for submerged brackish water plants important as waterfowl foods.

Heavy rainfall and the opening of the water control drop logs for six days in March to relieve possible flood conditions in the Ponte Vedra residential area 20 miles upstream, unfortunately lowered the desired salinity of 20 to 30 per cent sea strength within the impoundment. Salinity readings in March showed a high for the area of 10 per cent sea strength. Water levels stabilized at 4.4 feet at the dam gauge, compared to 3.0 feet one year ago. The desired average water depth of 2 to 3 feet was reached.

Water quality tests and vegetation occurrences were taken at nine equidistant stations in late May for comparison with similar data accumulated in May 1958. Salinity tests showed that, for all practical purposes, the 10 mile long area may be considered as five miles of brackish water and five miles of fresh water waterfowl habitat, for the lower and upper extremities respectively. Later observations found good to excellent growths of widgeon grass along the southeastern borders.

Two sloughs on the peninsula selected by previous investigators as the most suitable areas for water draw-down, and planting operations were surveyed in June to determine the most feasible means of managing for waterfowl food plantings. Existing vegetation, natural drainage, and the overall scope of the area was noted. Possible future improvements and management procedures for the peninsula's dozen or more sloughs were also taken into account.

Sprigging and seeding of Bermuda grass on the dam was accomplished in 1958. The entire dam was again fertilized in April, 1959. The grass is now well established on the north slope of the dam and has proven to be an excellent soil stabilizer for this area.

Approximately 3,000 coot and 500 to 700 ducks populated the area during the third quarter of 1958-59. Three pairs of lesser scaup as well as 12 coot are still utilizing the area. No nest nor brood occurrences have been observed for these species. One brood of five wood ducks has been observed, and reliable reports



indicate at least three more broods in the impounded area.

Work during 1959-60 consisted of filling washouts on the dam, repairing the control structure, installation of an automatic tide gate, preservative treatment on the control structure and scraping and painting the stop logs. The grass was mowed on the dam and fertilized with 6-6-6 commercial fertilizer at the rate of 300 pounds to the acre. Two ditches were developed and each installed with a 16-foot drain culvert with sliding gate valve for draining two fresh water sloughs to be developed in waterfowl food plantings. The northern ditch was seeded with 100 pounds of common rye grass. The rye grass failed to establish. Both ditches were fertilized with 6-6-6 at 300 pounds per acre and seeded with common Bermuda grass at 30 pounds per acre and raked in. Both ditches are draining satisfactorily. Jap millet planted in the fall of 1959 resulted in dwarf fruiting plants with a very limited seed production. Failure is presumed to be the result of a late planting and low soil fertility. Approximately 7.0 miles of road were developed or improved to provide dry access to the planted sloughs. Fences were repaired and boundary signs replaced as needed.

A second introductory planting of widgeon grass established this waterfowl food plant within the southern six miles of the impoundment. Stabilized high water levels and reduction of the salinity of the impounded water have effectively eliminated the majority of undesirable saltmarsh vegetation. Approximately 90 acres of tropical cattail were sprayed by helicopter applying Dowpon at a rate of 20 pounds acid equivalent per acre. Water quality tests and vegetation analysis were taken in the impoundment for comparison with similar samples taken in 1958 and 1959. The impoundment was cover mapped for comparison with cover mapping accomplished in 1957. Salt water was let in during June for the first time in two years. Salinity readings rose to 6.0-6.5% sea strength, compared to 2.0% sea strength in early June. It is suggested that two additional auto tide gates be installed to facilitate future intake of salt water.

Six wild turkeys were trans-



planted to the peninsula from south Florida. Although still on the area, they apparently did not reproduce in 1959-60. Fourteen hogs trapped from the peninsula were transplanted to the J. W. Corbett Wildlife Management Area.

Waterfowl densities on the impoundment indicate utilization at 716.2 waterfowl days per acre. Calculations were based on aerial surveys from November, 1959, through March, 1960, except for ground population estimates taken for the month of January. All species of waterfowl common to north Florida, including Canada and blue geese, were observed utilizing the area. Fall migration started with occurrences of blue-winged teal, pintail and baldpate in early September. Major fall migrations occurred on October 18-19 and November 18. Spring migration started with major pushes of scaup on March 17. Peak populations on the area reached an estimated 30,000 birds during spring migration, and the average winter population was 10,000 birds.

Fresh water fishing and salt water

fishing have skyrocketed the area in popularity.

#### FW-1-R, Cooperative Statistical Project

Early in fiscal year 1959-60, Florida, in cooperation with other southeastern states, contracted with the Institute of Statistics at North Carolina State College to work out statistically reliable methods of gathering data needed in the operation of all state fish and game departments. The primary concern has been in connection with surveys of harvest, pressure, activity, and populations. Work performed has been in basic methodology and through consultation.

During the first year of the project, Florida perhaps took greater advantage of its facilities than did any other state. At least, Florida used 17½ days of consulting time, while Georgia used 13 and North Carolina and Tennessee used 9½ days each. One fish and one game biologist from Florida attended the workshop held in Raleigh in February. ●





Lake City Regional Office Building Constructed 1958-59

# FISCAL DIVISION

**T**HE Fiscal Division has a variety of important tasks, and is rated as a major division of the general administration of the Game and Fresh Water Fish Commission.

The Fiscal Division is held responsible for the accountability of all funds which comprise the State Game Fund and from which the Commission operates. The Division is also responsible for budgetary planning, in cooperation with appropriate staff officers, and governs the expenditures in proportion to revenue income so as to properly carry

out the approved conservation program over the entire state.

Other major duties of the Division include distribution of licenses to the County Judges, checking and submission of invoices, recording of arrests and fees, administration of property and property records and controls, and the sale of commercial licenses.

## REVENUE

The revenue from which the Commission operates is derived mainly from the sale of hunting and fishing licenses, both sport and commercial.

In sport licenses, it is interesting to note the trends of license sales as compared to the previous biennium—1956-58, and the current biennium under report—1958-60:

In resident hunting licenses, there was an increase of 27,700 licenses, from the 1956-58 total sale of 289,320 to the 1958-60 total sale of 317,020.

In non-resident hunting licenses, there was a decrease of 198 licenses, with 4,594 being sold in 1956-58 and 4,396 being sold in 1958-60. Such a decrease may suggest that the Commission should devise adequate programs to better attract and service the non-resident hunters.

In resident fishing licenses, there was an increase of 109,558 licenses, from the 1956-58 total of 605,985 to the 1958-60 total of 715,543.

In non-resident fishing licenses, there was a decrease of 8,172 licenses, with 360,714 licenses sold in 1956-58, and 352,542 being sold in 1958-60. Again, the decrease in non-resident license sales suggest that the Commission needs to devise adequate programs to better attract and service the non-resident fishermen so as to meet the competition of neighboring states.

Since tourism has always been held to be one of the two major economies of the state—the other being agriculture—it is evident that the Commission could make a substantial contribution to increasing the tourism economy by better catering to the tourist fisherman and hunter.

Other revenue of the Commission results from leasing of rights for timber, oil, grazing, stumpage and marl on Commission property. Additional revenue comes from the sale of Commission-owned equipment, no longer suitable for use, and from court case fees resulting from arrests for violations of the fish and game laws.

Contrary to general opinion, the State Game Fund from which the Commission is operated does not receive any money from the state general tax revenue. The reason for this is stated in the Constitutional Amendment which created the Commission and established it as a self-supporting agency.



Panama City Regional Office Building Completed After Biennium

**JOEL McKINNON**

**—CHIEF—**

It should be pointed out, however, that in past years the Florida Legislature has appropriated monies for control of noxious weeds and for fisheries improvement. Expenditures of these monies are administered by the Commission under control of the State Cabinet and Budget Commission.

The Commission also receives reimbursements from the Federal Government under the Pittman-Robertson program for aid to game management, and the Dingell-Johnson program for aid to fisheries management. The amount received each year is based partially upon the total number of fishing and hunting license holders in the state for the previous year or years.

In considering revenue, it is interesting to note that the Commission's revenue showed increases in all major categories when the 1958-60 revenue is compared to the 1956-58 revenue.

Sales of fishing licenses showed a revenue increase of \$110,042.50, from the 1956-58 total of \$1,665,520.25 to the 1958-60 total of \$1,775,562.75.

Sales of hunting licenses showed a revenue increase of \$153,446.00, from the 1956-58 total of \$1,352,434.50 to the 1958-60 total of \$1,505,880.50.

Sales of commercial licenses showed a revenue increase of \$5,175.75, from the 1956-58 total of \$71,185.60 to the 1958-60 total of \$76,361.35.

Revenue from court costs increased \$13,987.46, from the 1956-58 total of \$56,383.27 to the 1958-60 total of \$70,370.73.

A note of caution is to be found in comparing the increases of revenue for the two biennial periods to the increases of expenditures for the same two biennial periods. The biennial revenue increased \$284,359.15, from the 1956-58 revenue total of \$4,387,112.64 to the 1958-60 revenue total of \$4,671,471.79. At the same time, the biennial expenditures, to meet rising costs of materials and services, increased \$374,957.29, from the 1956-58 expenditure total of \$4,339,422.14 to the 1958-60 total of \$4,714,379.43.

#### ARRESTS AND FEES

The Fiscal Division is responsible for the recording of all fish and game arrests, and, when each case is disposed by the courts, the Fis-



Ocala Regional Office Building Constructed 1959-60

cal Division must bill the respective county for the arresting fees and mileage allowances as provided by law.

During the 1958-60 biennium, a total of 6,935 arrests were made by our Wildlife Officers, with 390 cases left pending, and 6,545 disposed. Total revenue in court costs was \$70,370.73 for the biennial period 1958-60.

These figures show that the Fiscal Division had to record the details for 6,935 arrests, and bill the respective 67 counties for 6,545 cases disposed of, and then record the \$70,370.73 in revenue in proper fashion.

#### LICENSES

One portion of the Fiscal Division's varied duties includes the responsibility for checking the reports of the 67 county judges relative to the sales of fishing and hunting licenses and various permits. The accountability for all licenses printed

by the Commission at the beginning of the year is a major responsibility of the Fiscal Division, and the records must in turn be verified by the State Auditing Department. The issuing of licenses to the County Judges offices, and the printing and composition of same, is also handled by the Fiscal Division.

#### INVOICES

For each expenditure of \$25.00 or more made by any division or employee of the Commission, a Commission purchase order is issued. This control factor is extremely important in the proper distribution of Commission funds, and in the implementation of approved programs.

After the expenditure has been made, each invoice submitted to the Commission for payment must be carefully checked by the Fiscal Division with reference to totals and extensions. The invoices are then submitted to the State Comptroller



West Palm Beach Regional Office Constructed 1959-60



for issuance of the warrant drawn against the State Game Fund.

### COMMERCIAL LICENSES

The Fiscal Division also handles the sales of commercial licenses, which are sold at the Tallahassee office upon receipt of the application by the buyer. These include the Retail and Wholesale Fish Dealer's licenses, the Commercial Boat licenses, the Boats for Hire licenses, the Game Farm and Guide licenses, and other similar licenses. The licenses, which are renewable at the end of each fiscal year, are forwarded directly to the applicant.

### PROPERTY CONTROLS

Another important section of the Fiscal Division is the Property Section, which has the responsibility of recording all purchases of equipment. When a piece of property is purchased, the Property Officer issues and records property memorandum receipts, which itemize the property involved, the condition of the property, and the employee or office to which it is issued.

The Property Officer makes periodic state-wide equipment inspections in order to keep the costs of operation on all types of equipment to a minimum.

Operational costs reports are maintained for each piece of vehicle equipment, which reports help determine facts as to proper operation and appropriate time of sale and replacement. In turn, such information assists in determining wise purchases of proper equipment.

### NEW BUILDINGS

During the biennial period, three new regional office headquarters buildings were constructed, and planning for the fourth building was accomplished. The three buildings completed were at Lake City, during the 1958-59 fiscal year, and at Ocala and West Palm Beach during the 1959-60 fiscal year. Construction of the three offices was accomplished at a total cost of \$48,668.44, and involved the transfer of only \$10,000.00 from the State Game Fund—\$5,000.00 in 1958-59, and \$5,000.00 in 1959-60. The remainder of the money for construction of the three office buildings was taken from the Commission's building fund resulting from the sale of the old Central office building at Tallahassee. The construction of the fourth regional office building, at Panama City, was initiated and completed after the end of the biennial period under discussion.

### BUDGETARY

The Fiscal Division also consults with each section and division in preparation of the individual budgets and program plans of expenditures for the forthcoming period. Preparation of the master budget for the fiscal year is also the responsibility of the Fiscal Division.

When the fiscal budget is approved by the Commission, the Fiscal Division must then exercise suitable controls to see that the rate of expenditures is proportionate to the rate of revenue at any particular time or period.

As shown in the following financial report, the fixed assets at the end of 1959-60 were evaluated at \$1,483,551.87. Fixed assets for the previous year of 1958-59 totaled \$1,324,135.25.

### REPORT

The following pages contain a complete statement of Commission State Game Fund receipts and expenditures for the fiscal year of 1958-59 and 1959-60.

Also included are circle-graphs demonstrating financial expenditures in various departments and functions, as well as comparative receipts, and additional information.



## WILDLIFE BRINGS WEALTH



# FLORIDA GAME AND FRESH WATER FISH COMMISSION

Financial Statement — July 1, 1958 Thru June 30, 1960

## Statement of Cash Receipts, Disbursements and Balances

	1958-1959		1959-1960	
	Item Total	Source Total	Item Total	Source Total
<b>Receipts:</b>				
Beginning Cash Balance July 1		\$ 146,658.24		\$ 221,023.06
License Sold by County Judges	\$1,816,616.75		\$1,843,955.50	
License Sold by State Office	48,834.30		53,651.05	
Revenue from Other Governmental Agencies	369,873.13		355,702.62	
Revenue from Use of Property	28,017.26		22,791.12	
Revenue from Sale of Fixed Assets	40,248.04		40,386.02	
Revenue from Publication of Magazine	30,149.77		32,220.58	
Revenue from Other Sources	2,411.72		6,613.93	
Total Cash Receipts Schedule "A"		2,336,150.97		2,355,320.82
Adjustment Account		215.89		
County Judges Account		91.10		35.80
Special Building Fund		54,283.33		42,317.03
Cancelled & Restored Warrants		2,537,399.53		243.95
Total Revenue Available				2,618,940.66
<b>Disbursements:</b>				
Salaries	1,246,959.47		1,302,650.68	
Repairs to Equipment, Maintenance, etc.	74,675.66		86,515.24	
General Printing & Reproduction	123,379.62		124,882.68	
Telephone, Telegraph, Postage & Freight	42,605.79		41,675.03	
Travel	86,285.69		90,645.08	
Other Contractual Services	61,516.95		48,758.55	
Motor Fuel & Lubricants	161,448.54		171,358.43	
Materials & Supplies, Other	42,022.30		65,178.77	
Office Materials & Supplies	11,921.64		13,034.75	
Insurance & Surety Bonds	47,553.50		44,082.49	
Educational, Agricultural, Scientific & Medical Supplies	65,643.38		38,697.25	
Parts, Fittings & Maintenance Supplies	46,669.88		53,375.25	
Rental of Building & Equipment	31,710.15		51,465.09	
Transfer to Federal Government	27,120.60		31,454.50	
Motor Vehicles	100,610.91		155,371.11	
Motors, Boats & Trailers	14,225.79		25,974.75	
Education, Medical, Scientific & Agricultural Equipment	3,430.41		8,876.81	
Buildings & Fixed Equipment	10,277.74		995.00	
Other Capital Outlay	33,627.78		71,987.09	
Office Furniture & Equipment	10,029.89		7,401.24	
Other Expenses	15,377.45		22,956.50	
Total Disbursements Schedule "B"		2,257,093.14		2,457,286.29
Adjustment Account				63.30
Transfer Special Building Fund		5,000.00		5,000.00
Building Construction & Furnishings		16,966.30		31,702.14
Total Disbursements		2,279,059.44		2,494,051.73
Ending Cash Balance		258,340.09		124,888.93
Less Special Building Fund Balance		37,317.03		10,614.89
Cash Balance Carried Forward June 30		\$ 221,023.06		\$ 114,274.04

### SCHEDULE "A"

	1958-1959		1959-1960	
	Item Total	Source Total	Item Total	Source Total
<b>SALE OF SPORTING LICENSE:</b>				
Fishing	\$ 879,162.00		\$ 896,400.75	
Hunting	754,432.00		751,448.50	
Trapping	751.00		783.00	
U. S. Permits	500.00		900.00	
Alien Hunting License	50.00		150.00	
State Hunting Permits	163,070.00		154,305.00	
Goose Permits	3,174.00		2,055.00	
Archery Permits	4,740.00		8,725.00	
Charlotte County Permits	3,625.00		1,985.00	
Previous Year's Permits	190.00			
Total Sporting License		1,809,694.00		1,816,752.25

(Continued on Next Page)

## SCHEDULE "A"—(Continued)

	1958-1959		1959-1960	
	Item Total	Source Total	Item Total	Source Total
<b>SALE OF COMMERCIAL LICENSE:</b>				
Retail Fish Dealer .....	13,854.00		12,485.00	
Non-Resident Retail Fish Dealer .....	250.00		100.00	
Wholesale Fish Dealer .....	3,250.00		3,000.00	
Non-Resident Wholesale Fish Dealer .....	2,000.00		2,000.00	
Boats for Hire .....	12,934.00		13,618.00	
Commercial Boats .....	2,037.30		1,964.80	
Boat Registration Fees .....			2,653.25	
Nutria License .....			500.00	
Hunting Preserve .....			725.00	
Guide .....	410.00		370.00	
Game Farm .....	1,285.00		1,585.00	
Wholesale Fur Dealer & Agents .....	385.00		705.00	
Local Fur Dealer .....	80.00		50.00	
License to Exhibit Poisonous or Venomous Reptiles .....	70.00		80.00	
Total Commercial License .....		\$ 36,555.30		\$ 39,836.05
<b>OTHER SOURCES:</b>				
Court Costs .....	\$ 34,561.05		\$ 35,809.70	
Miscellaneous Receipts .....	2,411.72		6,613.93	
Previous Year's License Collected .....	19,201.75		41,018.25	
Dingell-Johnson .....	77,734.98		65,464.63	
Pittman-Robertson .....	252,577.10		234,428.29	
Sale of Magazine Subscriptions .....	29,066.72		30,712.09	
Sale of Magazine Single Copies .....	1,083.05		1,508.49	
Sale of Old Equipment .....	40,036.79		37,334.02	
Sale of Confiscated Material & Equipment .....	211.25		52.00	
Sale of Land .....			3,000.00	
Charlotte County Grazing Lease .....	6,807.87		4,137.37	
Charlotte County Marl Lease .....	2,649.88		1,395.27	
Palm Beach County Lease & Easement .....	10,000.00		10,000.00	
C. & S. Flood Control .....	5,000.00			
Miscellaneous Leases .....	2,281.00		1,201.00	
Charlotte County Stump Lease .....	6,278.51		6,057.48	
Total Other Sources .....		489,901.67		478,732.52
Total Receipts .....		<u>\$2,336,150.97</u>		<u>\$2,335,320.82</u>

## SCHEDULE "B"

	1958-1959		1959-1960	
	Item Total	Grand Total	Item Total	Grand Total
<b>DISBURSEMENTS:</b>				
Salaries .....	\$1,246,959.47		\$1,302,650.68	
Professional Fees & Consultant Services .....	1,133.00		1,701.92	
Advertising Florida's Resources .....	2,293.85			
Communication & Transport of Things .....	42,605.79		41,675.03	
General Printing & Reproduction Services .....	123,379.62		124,882.68	
Repairs and Maintenance .....	74,675.66		86,515.24	
Travel .....	86,285.69		90,645.08	
Utilities .....	5,896.28		7,021.40	
Other Contractual Services .....	61,516.95		48,758.55	
Bedding, Clothing & Other Textile Products .....	330.97		7,381.74	
Building Construction Materials & Supplies .....	25.00		18.75	
Coal, Fuel & Other Heating Supplies .....	1,274.47		1,534.78	
Educational, Medical, Scientific & Agricultural Materials & Supplies .....	65,643.38		38,697.25	
Food Products .....	899.70		937.56	
Maintenance Materials & Supplies .....	46,669.88		53,375.25	
Motor Fuel & Lubricants .....	161,448.54		171,358.43	
Office Materials & Supplies .....	11,921.64		13,034.75	
Other Materials & Supplies .....	42,022.30		65,178.77	
Insurance, Surety Bonds & Auto Liability .....	47,553.50		44,082.49	
Pensions & Benefits .....	600.00		600.00	
Rental of Buildings & Equipment .....	31,710.15		51,465.09	
Other Current Charges & Obligations .....	2,629.61		3,069.03	
Books .....	294.57		196.32	
Buildings & Fixed Equipment .....	10,277.74		995.00	
Educational, Medical, Scientific & Agricultural Equipment .....	3,430.41		8,826.81	
Motor Vehicles .....	100,610.91		155,371.11	

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## Schedule "B"—(Continued)

	1958-1959		1959-1960	
	Item Total	Grand Total	Item Total	Grand Total
Motors, Boats & Trailers .....	14,225.79		25,974.75	
Office Furniture & Equipment .....	10,029.89		7,401.24	
Other Structures & Improvements .....			495.00	
Other Capital Outlay .....	33,627.78		71,987.09	
Distribution & Transfers .....	27,120.60		31,454.50	
Grand Total .....		<u>\$2,257,093.14</u>		<u>\$2,457,286.29</u>

## SCHEDULE "B"—Disbursement by Departments:

	1958-1959		1959-1960	
	Budget Total	Dept. Total	Budget Total	Dept. Total
<b>ADMINISTRATION</b>				
Salaries .....	\$ 43,872.73		\$ 30,763.76	
General Expenses .....	84,985.17		6,247.48	
Capital Outlay .....	4,780.82	\$ 133,638.72	350.50	\$ 37,361.74
<b>GENERAL SERVICES</b>				
Salaries .....			20,536.48	
General Expenses .....			86,364.43	
Capital Outlay .....			1,055.00	107,955.91
<b>FISCAL BRANCH</b>				
Salaries .....	34,735.93		35,557.35	
General Expenses .....	2,751.58		6,565.52	
Capital Outlay .....	796.14	38,283.65	2,962.97	45,085.84
<b>FISH MANAGEMENT ADMINISTRATION</b>				
Salaries .....	6,276.75		38,426.20	
General Expenses .....	30,714.48		13,703.85	
Capital Outlay .....	1,790.51	38,781.74	7,268.92	59,398.97
<b>HYACINTH CONTROL</b>				
Salaries .....	23,291.38		26,214.69	
General Expenses .....	20,699.06		29,069.75	
Capital Outlay .....	246.59	44,237.03	11,356.26	66,640.70
<b>DINGELL-JOHNSON</b>				
Salaries .....	62,963.03		69,473.55	
General Expenses .....	30,984.55		44,619.13	
Capital Outlay .....	9,603.85	103,551.43	7,213.85	121,306.53
<b>WINTER HAVEN HATCHERY</b>				
Salaries .....	9,150.00		8,780.00	
General Expenses .....	4,678.99		3,926.14	
Capital Outlay .....	2,219.50	16,048.49	63.11	12,769.25
<b>HOLT HATCHERY</b>				
Salaries .....	4,448.50		4,462.50	
General Expenses .....	2,807.19		3,073.54	
Capital Outlay .....	2,132.69	9,388.38		7,536.04
<b>INFORMATION &amp; EDUCATION</b>				
Salaries .....	53,082.69		50,000.53	
General Expenses .....	58,874.24		41,724.81	
Capital Outlay .....	9,735.08	121,692.01	6,257.80	97,983.14
<b>YOUTH PROGRAM</b>				
Salaries .....	8,460.00		9,718.38	
General Expenses .....	2,997.85		3,736.23	
Capital Outlay .....	54.50	11,512.35	2,635.12	16,089.73

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## Schedule "B"—(Continued)

	1958-1959		1959-1960	
	Budget Total	Dept. Total	Budget Total	Dept. Total
<b>MAGAZINE PUBLICATION</b>				
Salaries .....	15,452.07		20,023.00	
General Expenses .....	73,545.77		84,994.42	
Capital Outlay .....	321.92	89,319.76	189.98	105,207.40
<b>PITTMAN-ROBERTSON</b>				
Salaries .....	177,978.69		142,036.59	
General Expenses .....	142,506.39		157,477.11	
Capital Outlay .....	30,579.35	351,064.43	43,568.66	343,082.36
<b>GENERAL GAME MANAGEMENT</b>				
Salaries .....	5,418.95		32,879.24	
General Expenses .....	10,143.10		18,734.16	
Capital Outlay .....		15,562.05	534.69	52,148.08
<b>STATE HUNTS</b>				
Salaries .....	65,610.91		79,172.87	
General Expenses .....	33,731.43		27,440.59	
Capital Outlay .....	17.75	99,360.09	68.50	106,681.96
<b>NATIONAL HUNTS</b>				
Salaries .....	17,810.44		11,187.58	
General Expenses .....	30,200.24		33,026.01	
Capital Outlay .....		48,010.68		44,213.59
<b>COMMUNICATION DIVISION</b>				
Salaries .....	44,390.65		46,092.64	
General Expenses .....	23,728.50		24,356.10	
Capital Outlay .....	27,858.30	95,977.45	41,175.12	111,623.86
<b>AVIATION BRANCH</b>				
Salaries .....	37,928.00		39,368.29	
General Expenses .....	28,664.51		33,090.63	
Capital Outlay .....	377.40	66,969.91	28,428.85	100,887.77
<b>SOUTH FLORIDA REGION</b>				
Salaries .....	119,135.00		112,257.10	
General Expenses .....	46,375.36		47,159.19	
Capital Outlay .....	17,122.22	182,632.58	25,694.91	185,111.20
<b>NORTHEAST FLORIDA REGION</b>				
Salaries .....	146,540.99		148,272.48	
General Expenses .....	53,023.36		53,396.98	
Capital Outlay .....	11,726.39	211,290.74	19,065.90	220,735.36
<b>NORTHWEST FLORIDA REGION</b>				
Salaries .....	135,259.90		138,480.55	
General Expenses .....	40,844.73		43,956.05	
Capital Outlay .....	23,063.49	199,168.12	20,299.10	202,735.70
<b>EVERGLADES REGION</b>				
Salaries .....	103,053.75		104,919.50	
General Expenses .....	63,536.48		66,073.52	
Capital Outlay .....	16,339.20	182,929.43	21,822.99	192,816.01
<b>CENTRAL FLORIDA REGION</b>				
Salaries .....	132,099.11		134,027.40	
General Expenses .....	51,843.60		54,652.65	
Capital Outlay .....	13,731.39	197,674.10	31,235.10	219,915.15
Grand Total .....		\$2,257,093.14		\$2,457,286.29
<b>TOTAL EXPENDITURES BY BUDGET</b>				
Salaries .....	\$1,246,959.47		\$1,302,650.68	
General Expenses .....	\$ 837,636.58		\$ 883,388.29	
Capital Outlay .....	\$ 172,497.09	\$2,257,093.14	\$ 271,247.32	\$2,457,286.29



## GENERAL FIXED ASSETS

1958-1959

General Fixed Assets (Cost Valuation) as of June 30, 1959

Land and Buildings .....		\$ 510,801.99
Aircraft Equipment .....		32,241.17
Automotive Equipment .....		419,888.82
Marine Equipment .....		121,770.02
Motors .....	\$36,338.91	
Boats .....	48,552.64	
Trailers .....	36,878.47	
Office Equipment & Furniture .....		59,075.60
Photographic Equipment .....		13,729.71
Radio .....		59,952.28
Field Equipment .....		106,405.66
Live Stock .....		270.00
		<hr/>
		\$1,324,135.25

Decrease in General Fixed Assets in Fiscal Year

1958-59 over 1957-58 .....	\$ 68,789.36
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## GENERAL FIXED ASSETS

1959-60

General Fixed Assets (Cost Valuation) as of June 30, 1960

Land and Buildings .....		\$ 511,319.78
Aircraft Equipment .....		60,949.17
Automotive Equipment .....		465,997.32
Marine Equipment .....		131,340.29
Motors .....	\$39,907.48	
Boats .....	52,263.48	
Trailers .....	39,169.33	
Office Furniture & Equipment .....		67,039.39
Photographic Equipment .....		18,543.73
Radio Equipment .....		112,705.90
Field Equipment .....		115,386.29
Live Stock .....		270.00
		<hr/>
		\$1,483,551.87

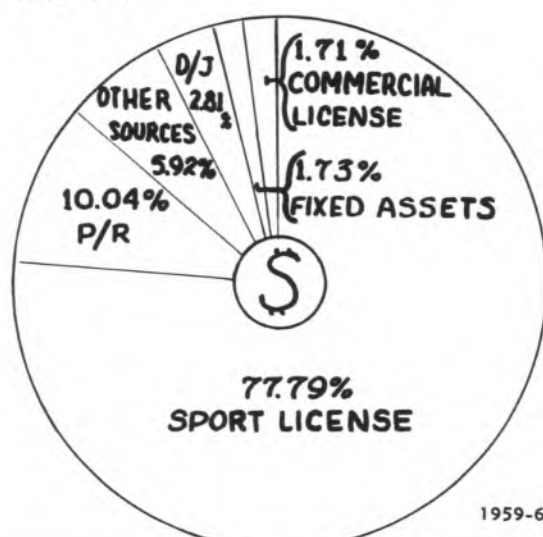
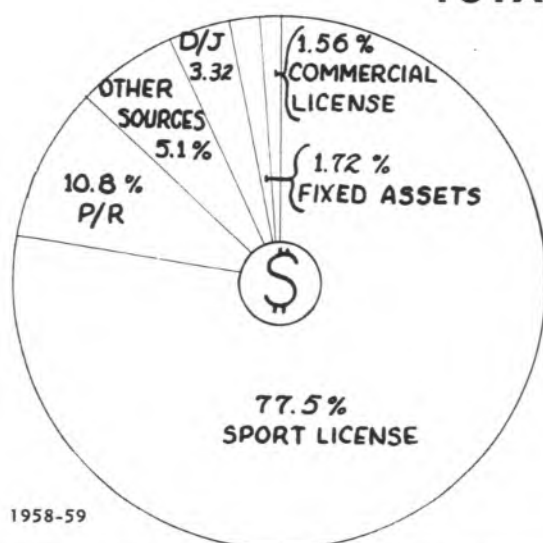
Increase in General Fixed Assets in Fiscal Year

1959-60 over 1958-59 .....	\$ 159,416.62
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## TOTAL ARRESTS AND DISPOSITIONS STATEWIDE FOR GAME AND FISH LAW VIOLATIONS

Total number arrests made July 1, 1958-June 30, 1959 .....	3,616	
Cases Pending .....	46	
Cases Disposed of .....		3,570
 Total number arrests made July 1, 1959-June 30, 1960 .....	3,319	
Cases Pending .....	344	
Cases Disposed of .....		2,975

## TOTAL RECEIPTS



	1958-59 Receipts	Percentage	1959-60 Receipts	Percentage
Sport License .....	\$1,809,694.00	77.50%	\$1,816,752.25	77.79%
Commercial License .....	36,555.30	1.56%	39,836.05	1.71%
Pittman-Robertson .....	252,577.10	10.80%	234,428.29	10.04%
Dingell-Johnson .....	77,734.98	3.32%	65,464.63	2.81%
Fixed Assets .....	40,248.04	1.72%	40,386.02	1.73%
Other Sources .....	119,341.55	5.10%	138,453.58	5.92%
Total .....	\$2,336,150.97	100 %	\$2,335,320.82	100 %

## RECEIPTS BY CATEGORIES

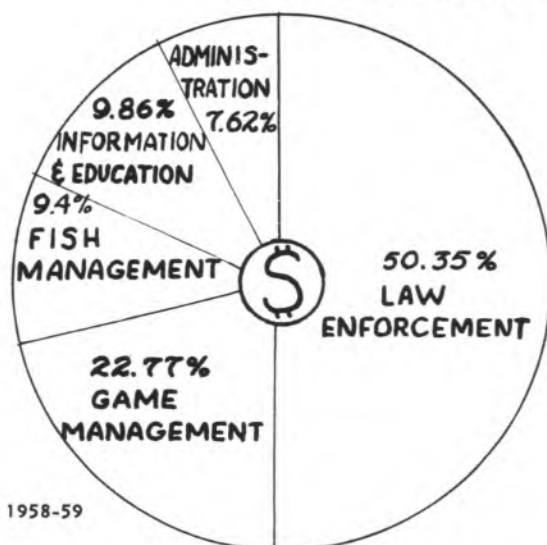


	1958-59 Receipts	Percentage	1959-60 Receipts	Percentage
*Fishing .....	\$ 913,487.30	39. 1%	\$ 932,221.80	39. 9%
**Hunting .....	932,762.00	39. 9%	824,366.50	39. 5%
Federal Aid .....	330,312.08	14. 1%	299,892.92	12. 9%
Other Sources .....	159,589.59	6. 9%	178,839.60	7. 7%
Total .....	\$2,336,150.97	100 %	\$2,335,320.82	100 %

\*Includes all Sport and Commercial Fishing License.

\*\*Includes all Sport Hunting License, Permits and Commercial Game License.

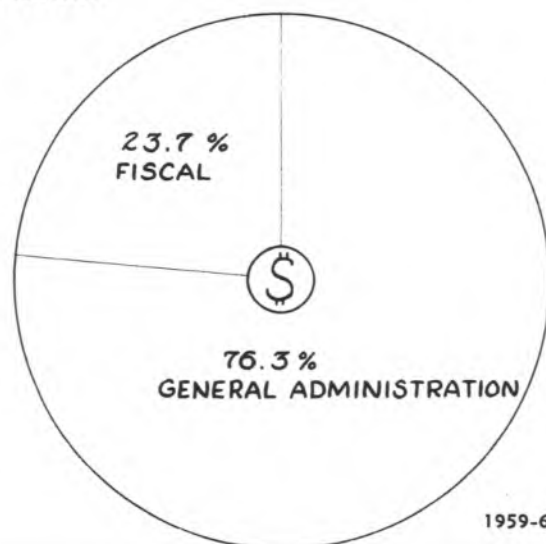
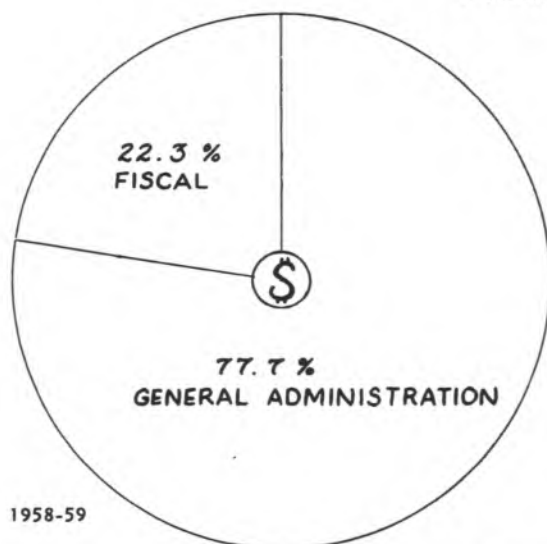
## TOTAL DISBURSEMENTS: BY ACTIVITY



	1958-59 Receipts	Percentage	1959-60 Receipts	Percentage
Administration .....	\$ 171,922.37	7.62%	\$ 190,403.49	7.75%
Information and Education .....	222,524.12	9.86%	219,280.27	8.92%
Fish Management .....	212,007.07	9.40%	267,651.49	10.90%
Game Management .....	513,997.25	22.77%	546,125.99	22.22%
Law Enforcement .....	1,136,642.33	50.35%	1,233,825.05	50.21%
Total .....	\$2,257,093.14	100 %	\$2,457,286.29	100 %

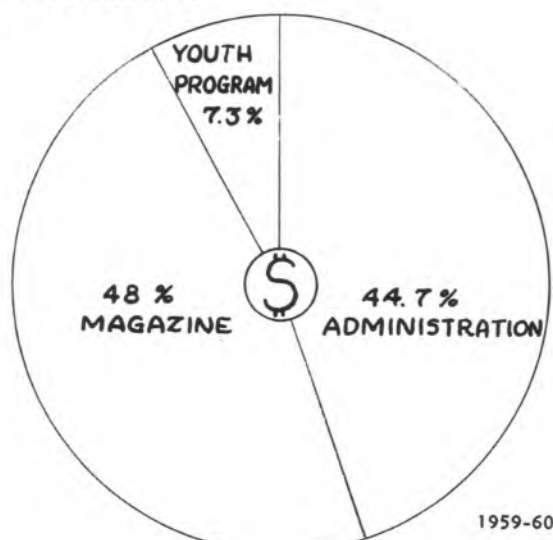
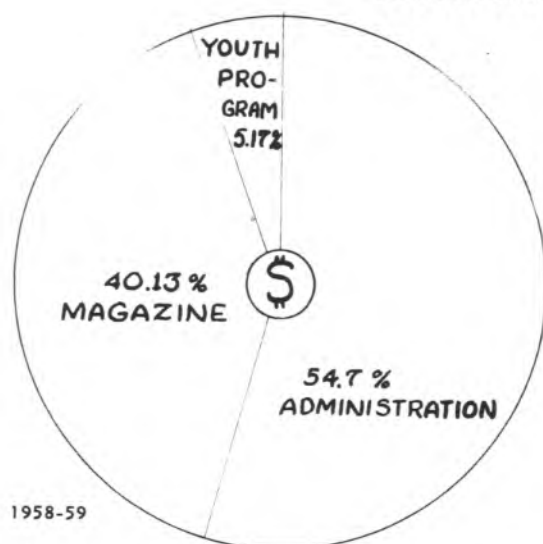
## EXPENDITURES BY DEPARTMENTS

### Administration



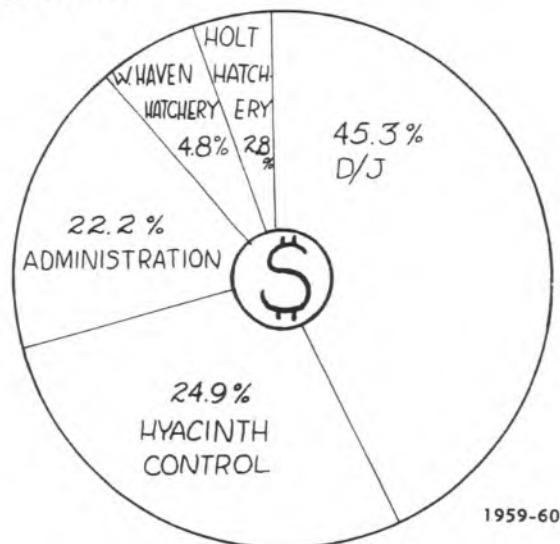
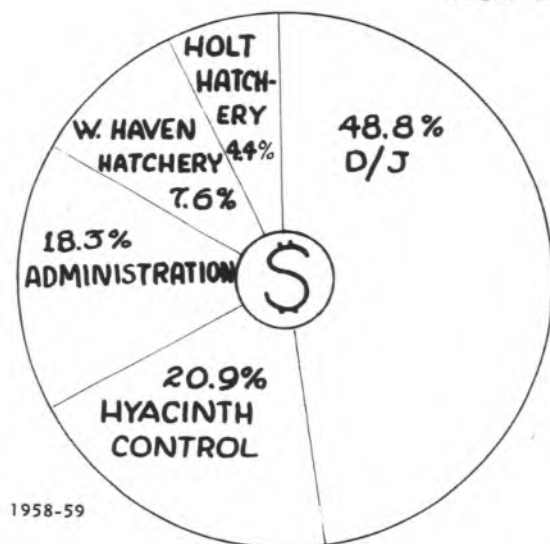
	1958-59 Receipts	Percentage	1959-60 Receipts	Percentage
General Administration .....	\$ 133,638.72	77.7%	\$ 145,317.65	76.3%
Fiscal .....	38,283.65	22.3%	45,085.84	23.7%
Total .....	\$ 171,922.37	100 %	\$ 190,403.49	100 %

## Information & Education



	1958-59 Receipts	Percentage	1959-60 Receipts	Percentage
Administration .....	\$ 121,692.01	54.70%	\$ 97,983.14	44.7%
Youth Program .....	11,512.35	5.17%	16,089.73	7.3%
Magazine Publication .....	89,319.76	40.13%	105,207.40	48%
Total .....	\$ 222,524.12	100%	\$ 219,280.27	100%

## Fish Management



	1958-59 Receipts	Percentage	1959-60 Receipts	Percentage
Administration .....	\$ 38,781.74	18.3%	\$ 59,398.97	22.2%
Hyacinth Control .....	44,237.03	20.9%	66,640.70	24.9%
Dingell-Johnson .....	103,551.43	48.8%	121,306.53	45.3%
Winter Haven Hatchery .....	16,048.49	7.6%	12,769.25	4.8%
Holt Hatchery .....	9,388.38	4.4%	7,536.04	2.8%
Total .....	\$ 212,007.07	100%	\$ 267,651.49	100%



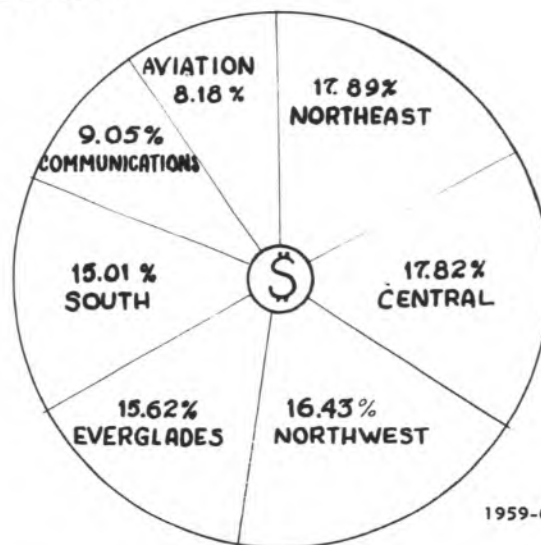
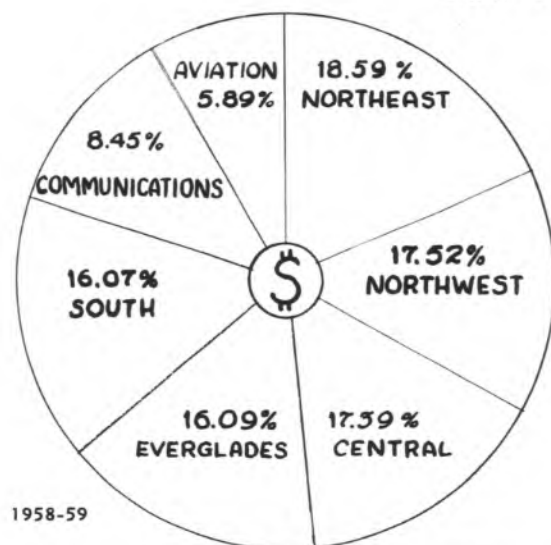
## Game Management



	1958-59 Receipts	Percentage
Pittman-Robertson .....	\$ 351,064.43	68.30%
General Game Management .....	15,562.05	3.02%
State Hunts .....	99,360.09	19.33%
National Hunts .....	48,010.68	9.35%
Total .....	\$ 513,997.25	100 %

	1959-60 Receipts	Percentage
Pittman-Robertson .....	\$ 343,082.36	62.8%
General Game Management .....	52,148.08	9.5%
State Hunts .....	106,681.96	19.6%
National Hunts .....	44,213.59	8.1%
Total .....	\$ 546,125.99	100 %

## Law Enforcement



	1958-59 Receipts	Percentage
South Region (14 Counties) .....	\$ 182,632.58	16.07%
Northeast Region (16 Counties) ..	211,290.74	18.59%
Northwest Region (16 Counties) ..	199,168.12	17.52%
Everglades Region (9 Counties) ..	182,929.43	16.09%
Central Region (12 Counties) ...	197,674.10	17.39%
Aviation (Statewide) .....	66,969.91	5.89%
Communications (Statewide) ....	95,977.45	8.45%
Total .....	\$1,136,642.33	100 %

	1959-60 Receipts	Percentage
South Region (14 Counties) .....	\$ 185,111.20	15.01%
Northeast Region (16 Counties) ..	220,735.36	17.89%
Northwest Region (16 Counties) ..	202,735.70	16.43%
Everglades Region (9 Counties) ..	192,816.01	15.62%
Central Region (12 Counties) ...	219,915.15	17.82%
Aviation (Statewide) .....	100,887.77	8.18%
Communications (Statewide) ....	111,623.86	9.05%
Total .....	\$1,233,825.05	100 %



# Information and Education

**ROBERT A. DAHNE----**Chief

**T**HE DUTY of the Information and Education Division is to inform and educate the people of Florida as to the desirability of proper conservation in all its aspects, and as to the programs and policies of the Game and Fresh Water Fish Commission.

To accomplish this duty, the Division uses many programs, methods and ways of informing and educating the interested public.

## **PROCEDURES**

Operational procedures and policies of the Information and Education Division are outlined as follows:

By its nature, the Information and Education program carried on by the Florida Game and Fresh Water Fish Commission is both intricate and widely diversified.

In all, the Information and Education Division is responsible for carrying on a wide spectrum of inter-

related programs that fall roughly into the five general classifications of Information, Education, Publicity, Public Relations and Internal Employee Services.

Each of these major programs contains, of course, many minor and varied programs and projects.

In general, the Information and Education work is carried on two main levels: Out-of-State Information and Education, and Intra-State Information and Education. Of the two, the Intra-State work has always been considered the more important phase of the Commission's I&E work.

## **OUT-OF-STATE**

The Out-of-State I&E program is carried on primarily through the office in Tallahassee. In its essence, the theme of any programs designed for out-of-state dissemination is to publicize the great potentialities of

fishing and hunting in Florida. Much of this work is involuntary in that it is done at specific request from persons, concerns and states outside of Florida. The out-of-state work undoubtedly results in the arrival of many hundreds of out-of-state visitors—fishermen and hunters—and many prospective permanent residents.

## **INTRA-STATE**

The Intra-State work of the Information and Education Division is considered to be of most vital interest to the Florida Game and Fresh Water Fish Commission. This is because the primary duty and responsibility of the Game Commission is to the Florida citizens who purchase licenses to hunt and fish within the state.

## **POLICIES**

The I&E Division is primarily charged with the responsibility of informing and educating the general public as to the policies, the work programs, the game and fish laws and the management practices which are being set into motion by the Commission.

The I&E Division is not, and has never been considered to be, a propaganda machine. Nor is it the "brain" of the Commission. It serves, instead, as the "tongue" of the Commission, giving voice, in all possible ways, to the official policies and practices of the Commission.

It is not the duty nor the intent of the Information and Education Division to in any way infringe upon or compete with established private staff or free-lance writers, editors and programists for newspapers, magazines, books and radio and television stations. Instead, it is the duty of the I&E Division to cooperate with and assist in every possible way all such writers and editors so as to help them present complete facts about fish and wildlife.

## **ORGANIZATION**

In order to effect an efficient program on a state-wide basis, the Staff Officer known as the Chief of Information and Education has the assistance, cooperation and advice of five Regional Information Extension Officers. These Officers, located in each Region headquarters office of the Commission, are completely responsible for the proper conduct of complete information and education pro-

grams in the areas encompassed by the respective Regions.

Under the Regional administrative set-up, all state-wide informational or educational programs are organized and set into motion by the Tallahassee office, as per the policies set forth by the Commission and its Director. The programs are then carried out on a Regional, or local, basis by the Regional Officers.

Thus, when an official policy or operation is adopted by the Commission or its Director, the informational and educational aspects are organized and coordinated by the Tallahassee office through the Regional offices.

The Chief of I&E also has complete responsibility for all actions and programs carried on by the Chief of the Youth Education Section, the Chief of the Audio-Visual Section, and the Chief of the Conservation Extension Section.

The Division office handles all state-wide news releases emanating from the Commission. It is also responsible for preparing, processing, editing and distributing the majority of pamphlets, booklets, brochures, posters and similar printed items used by the Commission to inform and educate interested persons as to wildlife and the conservation thereof.

Where the Regional Information Officer has the duty of advising and counseling the Regional Manager and field employees, the Division office has the duty of advising and counseling the Commission's administrative officers as to certain public relations problems and programs.

Much time during the biennial period was spent in defining and re-organizing the Divisional field operations. Much effort went into upgrading the calibre of work produced by Division employees, and in placing balancing controls—such as quarterly reports and operational assignments—into effect for all employees of the Division. The Merit System job classifications and specifications were written for the categories of work within the Division, and, for the first time, a competitive examination system for new Division employees was developed and utilized.

The Division office is occupied much of the time with the routine administrative chores of preparing

and approving programs, processing invoices and reports, and developing new and more efficient concepts of work and operational procedures.

The assignments of duties and spheres of activities for the Division are as follows:

#### REGIONAL EXTENSION

The Regional Information Extension program is designed to extend directly into a region the official programs and policies of the Commission so as to inform and educate the people in the communities of a specified group of counties.

Basically, the Regional Information Extension Officer is charged with the supervision and application of a well-rounded program to inform and educate the publics of the region to better fish and wildlife conservation practices.

The official state-wide Information and Education Division programs are created and formulated by the state office under policies set forth by the Director and the Commission. The programs are then applied uniformly in each Region through the work of the Regional Information Extension Officers.

Just as the Regional Manager is, within a given Region, the official representative of the Commission's Director, so is the Information Extension Officer the official Regional representative of the Information and Education Division.

The Regional IE Officer is charged with the responsibility for making

decisions and supervising and applying programs within a given framework of activities and interests, in adherence to specific policies and programs set forth by the state office. This allows the placement of any overall information and education program into immediate effect at all points in the state with no discrepancies of policy or administration.

The Regional IE Officer deals with both the "external public" and an "internal public." He is, of necessity, concerned with the general public, as well as with the internal employees of the Commission.

For these reasons, the Regional Information Extension Officer must be a specialist in all phases of the proven techniques used in informing and educating the "mass mind" of the public of Florida.

The techniques and tools at the command of the Information Officer include the following:

**NEWS RELEASES**—All news releases emanating from the Regional office for distribution to the public and the press are prepared and processed by the Regional Information Extension Officer, subject to the approval of the Regional Manager. Such releases may concern any phase of the Regional operations. The five Regions produce an average total of 100 such written releases each year, in addition to many releases given verbally by telephone, personal visitation, or other method.





**EXHIBITS**—Design, creation and operation of all public exhibits and special promotions sponsored by and within a Region are under the supervision of the Regional IE Officer, subject to final approval by the Regional Manager. Since a Region may be operating several exhibits simultaneously, it is apparent that one individual cannot do all the actual work involved. Therefore, the properly operated exhibit is installed only with the approval of the Regional Manager and the Area Supervisor who must provide much of the man-power to install and maintain the exhibit. Over sixty exhibits for fairs, conventions, special meetings and public promotions are installed and operated each year. Work is also done with Fishathons for children, special stage shows, and similar promotions.

**LIVE APPEARANCES**—The Regional Information Extension Officer has the duty of acting as "booking agent" for requests from the general public for appearances of employees at meetings, special promotions and on television and radio programs. Since official Commission policy encourages every employee to handle public relations for himself and his job, the Regional IE Officer has the duty of encouraging and assisting any and all employees in such efforts. Each employee of the Commission is an expert in his particular field and upon his particular job, and the public has the right

and desire to see and hear such experts. Therefore, the Regional IE Officer has the materials and the tools to aid any employee in presenting his particular field of knowledge and employment to the public in the proper light. For employee public appearances, the Regional IE Officer has available Master Speeches, Motion Films, Color Slide Lectures, Charts and Graphs, Photo-Exhibits, Animal Exhibits, and similar materials for use by employees. Such employee appearances may be public talks to organizations, school lectures, television and radio program appearances, wildlife shows, and convention or meeting presentations. Such appearances by employees number well over 1,000 each year.

**LITERATURE** — The filling of mail-requests from the public for literature published by the Commission is an important part of the IE Officer's duties. The answering of mail correspondence to and from the Regional office is the duty of the IE Officer when the mail involves general information-requests from the public. The writing of new literature, upon specific assignment by the state office, is also part of the function of the IE Officer.

**INTERNAL SERVICES**—Special functions and responsibilities of the Regional IE Officer for the employees of the Commission—the internal public — includes employee morale, employee training, and employee aids. The Regional Informa-

tion Extension Officer is an important link between the employees and administration.

**PHOTOGRAPHY** — Field photography is an important tool of the Regional Information Extension Officer. Each Officer is fully equipped photographically, and draws supplies of film and accessories from the state office. Photo assignments range from law-enforcement court evidence photographs to identification photographs of fish and wildlife, and the recording of outdoor recreation scenes. Identification photographs of all employees are also taken for the official records.

**LOAN LIBRARIES**—The Regional motion film loan library contains a basic assortment of from 18 to 22 films that are shown by employees to the public, or loaned to the public. Also available for loan to the public and to employees are over 400 color slides with printed lecture code-cards. Other loan material includes study-skins, exhibit material, auto-slide projectors, film and slide projectors and screens, professional education books, and similar items. These materials are under the supervision of the Regional Information Extension Officer.

**EXTENSION PROGRAMMING** —Certain portions of the programming for the Youth Education Section and the Conservation Extension Section are of direct concern to the Regional IE Officer. Basic contact work and information and education work for the Section programs is often performed by the Regional IE Officer. This includes consultations with youth club advisors, public school resource-use education, liaison work with adult organizations, and visitations with the public officials.

**SPECIAL EVENTS**—A varied assortment of activities, classified under Special Events, also occupies the Regional IE Officer. He may serve as production manager or emcee for a stage presentation, as organizer of a field trial, or as a photographer for work programs of the allied Divisions or Sections—Game Management, Fisheries, Aviation, Communications and Law Enforcement. He may serve as press agent or publicity specialist for a special promotion. Since the Regional IE Officer specializes in informing



the public, he automatically becomes involved in many special events.

**ADVISORY DUTIES**—The information Extension Officer serves as a public relations advisor. He examines programs, and advises how such programs may be best adapted to his particular region. When requested, he renders advice, in the field of public relations, to the general public and all organizations. He continuously advises the state office of the Information and Education Division as to occurrences within the region, and as to developing program "trouble-spots" or problems.

### CONSERVATION EXTENSION

The Conservation Extension Section is designed to extend certain services and informational programs of the Commission directly to specialized categories of organizations and individuals that would not otherwise be able to avail themselves of such services or programs through ordinary channels.

At the present time, work of the Conservation Extension Section is divided into six principal phases:

1. State-wide firearms accident survey conducted on an annual basis in cooperation with the Florida Sheriffs and the National Rifle Association. Such survey statistics provide a basis for firearms safety education programs.

2. Supervision of a program of state-wide hunter safety instruction in conjunction with the National Rifle Association. All safety instructors and instruction in the state are certified through the Conservation Extension Section. The program includes grading examinations for

hunter safety credentials, certification of safety instructors, encouragement of instruction classes, and the handling of all inquiries and reports. A tentative legislative bill for mandatory safety instruction and graduation has been drafted.

3. Liaison with and between adult conservation organizations. Efforts are made to create needed civilian organizations, and to achieve harmonious relationships between existing organizations and the Commission. Efforts are also made to direct civilian organizational efforts into beneficial channels.

4. Gathering data for the Commission-published Directory of Florida Conservation Organizations. This affords a method for maintaining current information about all conservation organization in the state, and the Directory, itself, serves as an informational and service bond between organizations and the Commission.

5. Editing and publication of the monthly mimeographed bulletin **THE CONSERVATION SCENE**, which presents pertinent conservation news topics and programs directly to the key conservationists of the state. It also serves as an inter-agency publication for news from all state and federal conservation agencies, and as an internal educational house organ for employees of the Commission. Circulation has been in the total of 850 copies per month.

6. Organization and operation of a Landowner - Sportsman relationship program aimed at opening private lands to public hunting and fishing through a cooperative program achieving substantial benefits for both landowners and sportsmen. This will be done in cooperation with the Florida Agricultural Department and interested adult civilian conservation organizations.

### YOUTH EDUCATION

The Youth Conservation Education Section has the responsibility for all Commission programs which serve to educate children to the needs for good conservation and utilization of the natural resources, with emphasis on conservation of wildlife and fresh-water fish.

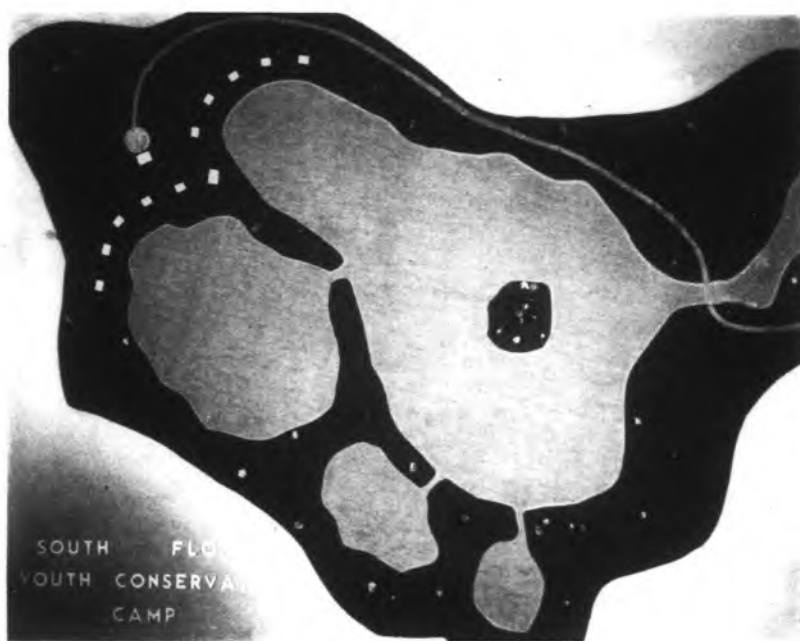
This Section exercises developmental planning and execution in the following categories of programs:



1. Creation, development and assistance to Commission-sponsored Youth Conservation Clubs. There are twenty-five such clubs now in existence on an all-year-round or part-year basis. Work consists of Merit Point programming, advisory work, and general assistance. The clubs are banded together in a Youth Conservation Club League, operating with League youth officers and programs. Independent clubs that are not Commission-sponsored or League members are also serviced with information and advisory counsel.

2. The Youth Education Section bears full responsibility for operation of the central Youth Camp in the Ocala National Forest. Additional camps are in detailed planning stage for South Florida and North Florida.





3. Allied youth education programs are in effect with a wide range of independent organizations, including Boy Scouts of America, Girl Scouts of the United States of America, 4-H organizations, Junior Garden Clubs, Camp Fire Girls, and similar organizations. These Commission-sponsored award programs for youth working in the conservation field are based upon cooperative creative programming, with a great deal of record-keeping and correspondence needed on the part of the Youth Section.

The work of the Youth Education Section is presented in a comprehensive fashion in a separate chapter near the end of this Biennial Report.

#### AUDIO-VISUAL

The Audio-Visual Section is concerned with all informational and educational programming done with Audio and Visual techniques and aids. The work of the Section is extremely important in that it deals in imaginative and creative presentations that interpret the work, programs and policies of the Commission to the general public of the state.

The broad phases of the Audio-Visual work are:

**TELEVISION**—The creation, production and distribution of sound-films to the commercial and educational television stations of the state has been highly successful. One hundred percent of the 22 commercial stations have certified by written statement that they repeatedly use and re-use the short film clips produced by the Commission. These are high-impact films featuring Commission programs and policies, and some deal specifically with encouraging increases in the populations of hunters and fishermen with subsequent increases in the sales of licenses and the production of revenue. Other television work includes the production of visual aids used by employees in making live appearances on feature programs.

**RADIO**—New programming for the 171 radio stations of the state involved the creation and production of half-minute and one-minute spots on radio records for use by program managers and disc jockeys. Over eighty percent of the stations of the state have certified in writing that they use and re-use the Commission recordings repeatedly. The spot recordings embody sounds of wild animals, with human voice narration and occasional music back-

grounds. The scripts are basically those used in the television films.

**LOAN LIBRARIES**—During the biennium, the feature motion film libraries were completely revamped and reissued. New procedures that ensure handling of the films on the most economical and effective basis were put into effect. Such films are shown and loaned by employees to organizations and on television programs. They serve to hold the attention of audiences for protracted periods by standard entertainment-education methods. A total of 65 copies of 21 feature films are carried in six loan libraries.

**PHOTOGRAPHY** — Documentary motion footage and still photographs of the Commission's programs and policies, and of wildlife and fish, is a continuing effort. The still photographs are used for publication in all state and national periodicals, while the motion footage goes into the master-film files of the Commission for the production of television and feature films. This details a great deal of field photography, darkroom production, and cataloguing, indexing and distribution work.

**ARTWORK**—The Audio Visual Section also provides a certain amount of chart-work and illustrative material for all Divisions of the Commission.

#### SUMMARY

In general, the Information and Education section is charged with the responsibility of informing and educating the public to proper conservation methods and practices. It is vitally concerned with publicizing the activities and policies of the Florida Game and Fresh Water Fish Commission. It is always interested in maintaining good relations between the sportsmen and the Commission in all fields, and it must attain continuous and complete contact with all Commission employees and programs. Essentially, the Information and Education Division is a service department — offering its service to all persons connected with the Commission, and to all sportsmen and citizens of Florida and the United States. ●

# FLORIDA WILDLIFE

**BILL HANSEN**  
—Editor—

**T**HE MONTHLY PUBLICATION OF FLORIDA WILDLIFE is an important medium employed by the Game and Fresh Water Fish Commission for the effective dissemination of information and educational material so important to the eventual success of present and future Commission programs.

A total of 44 major state Game and Fish Commissions now make use of periodic publications as a proven public information service. These publications range from weekly bulletins to the slick monthly magazine type format. FLORIDA WILDLIFE has recently obtained high national recognition in the latter category.

A balanced contents of factual, technical and general type articles

are presented each month. Subjects covered in each issue include Commission programs, fresh water fishing, hunting, conservation and natural history in general.

FLORIDA WILDLIFE is dedicated to the conservation, preservation and propagation of Florida's fresh water fish, game and related natural resources. The purpose of this magazine is to acquaint and educate the public with the many problems connected with the immense task of conserving a natural heritage for all future generations, and to report on the progress being made by the Commission in meeting the challenge. It also seeks to develop a general understanding and cooperative public relations between state officials and technicians and the people of Florida.

The Commission now prints 24,000 copies of each monthly issue. Approximately 23,000 are mailed each month to a regular mailing list consisting of paid subscribers, Commission employees, state officials and members of other state and Federal conservation agencies. The remaining 1,000 are distributed free of charge through various fairs and exhibits, Chambers of Commerce, and through official state promotional distribution agencies.

A portion of the cost of publishing FLORIDA WILDLIFE is paid for from the paid subscriptions which now go to all 50 states and several foreign countries. The remaining cost is absorbed by the Commission as an important public information service

with value received immeasurable as to dollars and cents value.

It should be remembered that, although this portion of the over-all budget earmarked for FLORIDA WILDLIFE is expended mostly on the monthly publication, the personnel of this department spend considerable time assisting in functions directly connected with other Commission departments.

Duties assigned to the small magazine staff of four include: editorial preparation, article writing and re-writing, photography, publication layout and makeup mechanics, field work, information disbursing, book-keeping, special addressograph and mailing procedure, related clerical duties and other required Commission activities.

Under the present organization and Commission policy, FLORIDA WILDLIFE has, for the past biennium, shown a continuous increase in paid circulation and improved format quality. During the same period, through an efficient systematic organization, the general over-all publishing cost per unit has been steadily decreasing.

Research in the magazine publishing field shows that approximately 2½ individuals read each distributed copy of this type monthly periodical. Based on the aforementioned figures, the Game and Fresh Water Fish Commission's monthly magazine, FLORIDA WILDLIFE, delivers a message of definite importance to approximately 680,000 readers annually. ●



# Radio Communications

**RHETT McMILLIAN**

**—Chief—**

**T**HE Communications Section was set up late in the year of 1948 to serve primarily as an aid to the Law Enforcement program. Beyond its primary purpose of serving as a tool for officers in the field, the radio system has since proved itself to be a valuable adjunct to the Commission's continuous efforts in achieving greater efficiency with a consequent saving in both time and money.

Now, the Communications Section not only serves as a law-enforcement tool, but also as an aid to greater flexibility in the overall state-wide administrative functions.

The headquarters of the Communication Section are located centrally in New Smyrna, and here are found the necessary operating tools of the far-flung radio system. Communications Headquarters keeps accurate cost records of each radio unit, operating manuals and signal cards which are prepared and furnished to Commission personnel, and a stock of emergency parts and supplies.

The communication operating equipment now in the Commission consists of 289 mobile units, including airborne sets, 29 base stations, including two stations at temporary sites. Six of the base stations are operated in cooperation with the State Forestry Services, two in cooperation with the State Park Serv-

ice, and one in cooperation with the South Florida Conservation District.

Base station locations are: New Smyrna, Molina, Munson, Eglin Field, Panama City, Bonifay, Wilma, Woodruff, Tallahassee, Perry, Cross City, Lake City, Jacksonville, San Mateo, Starke, Ocala, Williston, Leesburg, Tomoka, Magnolia, Lakeland, Myakka, Highlands, Okeechobee, Belle Glade, Immakolee, Miami, and the State Civil Defense Emergency Control Center.

Several antenna sites have been erected about the state, so ground

mobile units may connect to the larger antenna and send and receive for greater distances at important points.

The Commission continues to cooperate with the Federal Civil Defense, and the Communications system has taken important part in all disaster tests. The Chief of Communications is a member of the State Civil Defense Communications Committee.

The Communications Division is composed of six technicians, and has repair facilities and personnel at

## STATION LOCATIONS

COUNTY	LOCATION	COUNTY	LOCATION
Escambia	Molina	Volusia	Tomoka
Santa Rosa	Munson	Volusia	New Smyrna Beach
Okaloosa	Eglin Field	Lake	Leesburg
Bay	Panama City	Orange	Magnolia
Holmes	Bonifay	Osceola	Keenansville
Liberty	Wilma	Polk	Lakeland
Jackson	Woodruff	Pinellas	Safety Harbor
Leon	Tallahassee	Highlands	Sebring
Taylor	Perry	Sarasota	Myakka State Park
Dixie	Cross City	Charlotte	Bermont
Columbia	Lake City	Okeechobee	Okeechobee
Duval	Jacksonville	Palm Beach	Palm Beach
Bradford	Starke	Palm Beach	Belle Glade
Putnam	San Mateo	Collier	Immakolee
Levy	Williston	Collier	Naples
Marion	Ocala	Broward	Hollywood
Brooksville	Hernando	Collier	Trail Center

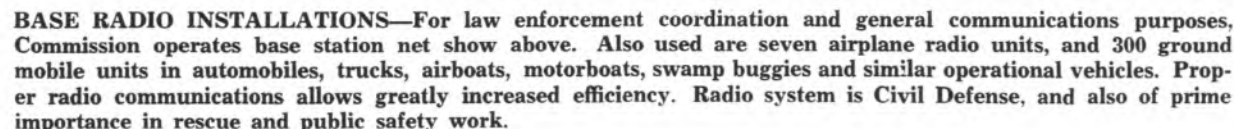
**AT LARGE-STATE CD EMERGENCY CONTROL CENTER**



The largest single project of this period has been the installation of selective calling decode boxes in all base stations. Prior to this time, any car within range of two or more stations, in automatic relay position, would key all such stations with resultant degradation of signal. The

Another major development has been the design and construction of a dialing system for certain control base stations, allowing them to con-

Initial work has been started on automatic satellite stations to be located at Weekiwahee Springs, Safety Harbor, Bermont, Keenansville, and on the Tamiami Trail. This work will be completed during the next period and will complete the statewide system as originally designed. ●





# A VIATION

WILLIAM S. DURKEE  
—Chief—

**L**AW enforcement is, without question, one of the very important functions of the Game and Fresh Water Fish Commission. Our wildlife officers are constantly confronted with this tremendous task, that is very necessary to the present and future welfare of our State. It is extremely essential that all means of assistance, including the use of Commission equipment, be utilized to the fullest extent to effectively maintain maximum results in our law enforcement program.

The function of the Aviation Section is to give close, coordinated air support to ground personnel at all times. Many various other duties are performed, including aerial spraying, surveys, photographic flights, personnel transportation, aerial stocking of wild turkey, public services and general assistance to other existing State and Federal Agencies. The air arm of the Game and Fresh Water Fish Commission has many times proven its worth and is considered a necessary and essential operational division.

This past biennium has experienced a positive progressive trend, with improvement of facilities and the replacement of needed equipment.

The Chief of the Aviation Section was appointed Director of Aviation for the State of Florida Civil Defense Council in 1959, resulting in the construction of a carefully planned

emergency procedure to be used in the event of any disaster.

This appointment also enabled the Aviation Section to obtain aircraft and aircraft engine replacement parts and materials, maintenance and shop equipment and various other items through Federal Surplus Property. Recently, a Bell Helicopter was procured at a fraction of its original cost, made possible by Federal Donable Properties. Needless to say, the versatility of the helicopter will offer tremendous assistance to specialized assignments.

Because of the many and varied tasks which an aircraft must perform, positive and thorough maintenance is a must. To facilitate this need, a complete aircraft and engine inspection and overhaul shop is maintained at Aviation Section headquarters in Ocala, Florida. In conjunction with maintenance, all pilot activity reports, operational cost record reports, aircraft and engine data, and administrative duties are carried on at division headquarters.

The fleet of seven aircraft are strategically based throughout the State, each being assigned to an individual region to carry out their various assigned duties.

At frequent intervals, each aircraft is returned to Ocala for a complete inspection, repairs or overhauls. The pilots assist and are supervised by qualified maintenance personnel.

An adequate stock of spare aircraft and engine parts and materials are immediately available to reduce the out-of-service time to a minimum.

In addition to general aircraft maintenance and aircraft radio installations, Commission owned airboats and outboard motors are frequently brought in for repairs and overhauls.

Aircraft used by the Commission include three Piper PA-18-A's; one Piper PA-25 Sprayer, one Cessna 182, one Stinson L-5 and one Bell Helicopter.

The Piper sprayer is used for the control of hyacinths and other noxious weeds.

During a 24-hour period, a pilot may be requested to assist in many tasks, day or night; such as patrol flying over many lakes and streams, game management areas, the famed Everglades, and public properties.

Commission pilots very frequently aid in the search for lost or missing aircraft, boats and unfortunate individuals who have met with accidents in the forests or upon the waters. General survey and aerial photographic work are commonplace, and with the coming of each fall, a statewide duck census is conducted by air for the purpose of classifying species and approximate numbers.

The aerial stocking of wild turkey has proven entirely successful, eliminating many hours of tedious traveling by ground personnel to the many re-stocking areas within the State of Florida.

Game Commission pilots must possess a technique of controlling their aircraft at altitudes and speeds not familiar to the average commercial pilot during routine flying. In addition, a complete and thorough knowledge of wildlife officer's duties and responsibilities is essential.

A large percentage of pilot activities involve ground operation, including law enforcement, public appearances with regard to information and education, equipment maintenance and general assistance wherever needed.

Operational procedures and divisional policies are constructed and constantly maintained to effect an economical, progressive and essential function of the Game and Fresh Water Fish Commission. ●

**T**HE completion, occupation, and dedication of the new headquarters building of the Northeast Region was probably the highlight of this biennial period. The regional staff now has adequate, comfortable quarters, and a sense of permanency is felt by all the men in the field.

The 16 counties that comprise the Northeast Region are Alachua, Baker, Bradford, Clay, Columbia, Dixie, Duval, Gilchrist, Hamilton, Lafayette, Madison, Nassau, Levy, Suwannee, Taylor, and Union. The region logically divides into four enforcement areas, each under the supervision of an area supervisor. Twenty-eight wildlife officers are the



## *The* Northeast Region

law enforcement arm of the region. Other regional personnel includes a regional manager, secretary, education officer, three radio station operators, pilot, fish management technician, and radio engineer. In addition, there are eight game management technicians working in the region, two more than during the previous biennium. These additions, together with an added radio engineer and a radio station operator, give the region a working force of 49 persons, which is two more than in the previous reporting period.

Statistics sometimes make dull reading, but a report of this kind is not complete without them. They do furnish, also an insight into the average working day of our Wildlife Officers.

Briefly then, the Wildlife Officers of this region traveled 1,193,274 miles, and made 1,576 arrests during the course of 178,651 hours of land patrol and 16,317 hours of water patrol. They spent 1,740 hours in court, 2,333 hours in meetings of various kinds, 2,072 hours in maintaining equipment, and 2,103 hours on office work which consists of making the various required reports.

The licenses-checked figure doubtless includes many duplications,

### **C. N. CLYMORE** Manager

but the old sportsman's complaint of never having his license checked is seldom heard nowadays. Forty-one illegal but usable deer, seven turkeys, and 6,300 pounds of fish were seized by the men, and donated to charitable institutions.

All officers are radio-equipped, and, with stations now located at Jacksonville, Lake City, Perry, Cross City, and Williston, there are no areas where radio coverage cannot be achieved. It is hard to overestimate the usefulness of the radio as a law enforcement tool in this region.

The Communications Division altered the radio stations so that when the stations are not manually operated, they are in an automatic position which permits the men to have 24 hour radio coverage. This has been a great advantage to the men in their work, as was the installation of an automatic station in the "fringe" area of Starke and Camp Blanding.

As important as law enforcement is, the long-range goal in this region

is recognized as education of the public, and no effort is spared in this department. All personnel participate in this phase of our work, but the main burden, of course, falls on the Information Extension Officer. He is almost constantly on the road, making talks to school groups, civic clubs, and sportsmens organizations, working with youth groups, getting out favorable news releases and pictures, and generally spreading the word of good conservation. Much emphasis has been laid on this work during the past two years in this region, and a growing awareness on the part of the public of the need for following good conservation practices is plainly apparent in many of our counties. This is evidenced by the fact that sportsmen's clubs have been organized and are actively functioning in Baker, Dixie, and Taylor counties. These are good game counties, but have been somewhat of a law enforcement problem in the past. The fact that the citizens of these counties have seen fit to organize these clubs is a sure sign of conservation progress.

Although it is little known, the Commission has a program of making rewards to certain citizens who assist in law enforcement work. A citizen who is directly responsible for the apprehension and conviction of a person in a major game case is entitled to a reward (\$25.00) upon certification by the proper authorities. We have paid several rewards in the Northeast Region, but it is noteworthy that no person who has received a reward turned in infor-



mation for the reward, but as a public duty. This is a fine program, but the main satisfaction comes from the fact that, reward or not, the public is becoming more and more aware of the importance of good conservation practices.

Requests for assistance with fish management problems have continued to increase, and the regional fish management technician works hard to see that all requests are promptly answered. In addition to pond poisoning and noxious plant control, the technician stocked 88 ponds, lakes, and streams with 180,000 bream, and 61 bodies of water with largemouth black bass. He inspected several hundred lakes and ponds. He assisted the fish management division on several large projects, and was in turn greatly aided by the hyacinth control unit with several hyacinth control problems in the region.

The seven management areas located in the Northeast region total 698,250 acres, with all but 96,250 acres available for hunting. The steadily increasing number of permits sold testifies to hunters' satisfaction with the management area program in this region. Larger kills of all game species are reported in the areas every year, which indicates

that the game biologists stationed in this region are doing an outstanding job.

During the biennium, the Cessna 170B was traded for a Cessna "Sky-lane," a more powerful and better equipped plane. With a complete instrument panel and radio gear, night flying has become routine, and many good cases have resulted. The plane is also used for such things as personnel transportation, fire spotting, photo surveys, search for missing persons, and duck counts. This plane is well suited to the needs of law enforcement work, and the experience of the pilot has enabled him to be of great assistance to the officers on the ground in making cases. Illegal fire hunters have been known to shut off their light and go home upon hearing a plane near them, whether it was our plane or not. They have learned that a plane in the vicinity very often means that wildlife officers in cars will soon make their appearance, and it is believed that considerable game has been saved as a result of the use of the plane.

One of the most important uses of the plane is in fire spotting. The pilot is always on the lookout for fires while on patrol, and has been the first to report several fires. The plane

is available to personnel of this and other regions when haste and distance are factors in making trips, and has been especially useful in this respect on several occasions.

One of the most important factors in managing our deer population has come as a side effect of the State Livestock Sanitary Board's highly successful screw fly eradication program. While the primary purpose of the program was to aid the Florida cattleman, all field personnel have noted the increase in our fawn population this past year. We will now be able to raise a much larger proportion of the fawns dropped that we formerly lost to screw worms. The program would be well worth while if it were conducted solely for the sake of our game.

The Northeast Florida Wildlife Officer's Club, composed of officers of the region, continues to hold its periodic meetings, and has seen the practice spread to other regions. Meetings are held quarterly, at which time the men have the opportunity to exchange ideas and experiences, and, quite often, officials from the Tallahassee office are present to explain new policies and programs, and to answer questions that arise during the course of the officer's work. It is felt that these meetings are invaluable from the standpoint of morale.

The formation and encouragement of sportsmen's groups is one of the most important aspects of the work in this region. A good working conservation program is not possible without the cooperation of the public, regardless of the efforts of a State conservation agency. All personnel of the region recognize this fact, and no effort is spared to help each and every sportsmen's club in the region to be a success. Several new clubs have been formed in the region in the last two years, and they, in turn, have been extremely helpful to the personnel of the region. On several occasions, members of sportsmen's clubs have held violators at the scene of violation until the arrival of the wildlife officer, and have appeared as witnesses at the trial. This type of cooperation between the two groups bodes well for the success of wildlife conservation in Florida. ●





## *The Northwest Region*

**J. W. BICKERSTAFF**  
Manager

**T**HE Northwest Florida Region encompasses nearly eight million acres of land, bordered on the west and north by Alabama and Georgia, and on the south by the Gulf of Mexico.

The lands of the region are composed mainly of hilly timberlands, wilderness areas, and older agricultural lands. Most of the fishable waters are in rivers and streams, although there are concentrations of lakes in the Tallahassee, Chattahoochee and Chipley areas. The region is unique in that it has the heaviest concentrations of farm fish-ponds under management by the Commission's Fisheries Division.

The region is the Third Conservation District of Florida, comprised of Bay, Calhoun, Escambia, Franklin, Gadsden, Gulf, Holmes, Jackson, Jefferson, Leon, Liberty, Okaloosa, Santa Rosa, Wakulla, Washington and Walton Counties.

Thirteen percent of all the land in Northwest Florida is found in the Commission's eight Wildlife Management Areas. This totals 1,009,420

acres, or more than one-quarter of all the Commission's management lands in the entire state.

Newest of the eight wildlife management areas is the 85,000-acre Point Washington area in Bay, Walton and Okaloosa counties.

Most outstanding of the management areas is the Eglin Field area, with 390,000 acres in Santa Rosa, Okaloosa and Walton Counties, jointly controlled by the Commission and the U. S. Air Force. The Eglin is rightfully acclaimed as a "sportsman's paradise," since it is noted as one of the best deer hunting areas in the South.

The centers for human populations are Pensacola, Tallahassee—site of the Commission's Central office, and Panama City, site of the Regional office. Personnel based at Panama City are the regional manager, secretary, information extension officer, fishery biologist, radio engineer, pilot, and two wildlife officers.

Highly important during the biennial period was the outstanding improvement evident in the overall

calibre of the employees, which resulted partially from careful Merit System replacements of resigned and retired employees. A large share of the improvement is directly traceable to the region's in-service training programs for employees.

The Commission's first Wildlife Officers Public Relations training program was held in this region. It was accounted as highly successful, and the results are still evident. Other training programs were held on the area basis in a rotating fashion that eventually reached all employees.

Promotion examinations were also held. These have been successful and have contributed to better employee morale. It is noteworthy that of all regional wildlife officers eligible for promotion to first class position, a total of 90.9 percent voluntarily participated in the examinations, and fifty-five percent achieved satisfactory ratings.

Other important facets of the regional work include cooperative endeavors with the new Choctawhatchee River Valley Wildlife and Outdoor Recreation Development Commission, the Northwest Florida Wildlife Association, the Eglin Field Wildlife Board, and similar groups.

The region is also the pilot for the Commission's new Regional Conservation Advisory Council, composed of prominent citizens of the Region. Members are Mr. Forace



# FLORIDA GAME AND FRESH WATER FISH COMMISSION NORTHWEST REGION HEADQUARTERS

Holland, chairman, Panama City; The Reverend M. A. DuRant, Marianna; Mr. John S. Pittman, Jay; Mr. W. I. ("Bubba") Stinson, DeFuniak Springs; and Mr. Payne H. Midyette, Sr., Tallahassee.

Over eight hundred farm fish ponds are under the technical assistance program of the regional fisheries biologist. During the biennium, the biologist checked public and private lakes and ponds to determine management needs, and 857,525 bream and 140,825 black bass were released in 435 lakes and ponds.

The biologist also assisted hatchery personnel with management needs at the Blackwater Hatchery at Holt. During the biennium, this Commission hatchery produced an average of 1,500,000 bluegill fingerlings and 70,000 black bass fingerlings each year.

First installation and successful operation of the new radio communications system for remote-control of base stations was also accomplished in the Northwest Region.

Radio communications for the region is accomplished by eight base stations and 69 mobile units. With the continuous effort to improve the region's operational vehicle equipment, causing transfers of radio equipment to new vehicles, and

maintenance of same, the radio engineer is engaged in a continuous effort.

Because of the topography of the region, the regional aviation program has always been a great asset in achieving good law enforcement throughout the 16 counties. During

the biennium, the pilot's routine air patrols and air-to-ground contact with the wildlife officers accounted for many arrests that otherwise would have been impossible. Air searches for distressed persons, and waterfowl inventories were also accomplished during the period.

The Northwest Region is divided into four enforcement areas, with a wildlife officer supervisor over each to supervise a combined total of 29 officers. A summary of law enforcement activities for the biennium shows totals of 160,744 hours on land patrol, 31,748 hours on water patrol, with a total of 1,364,704 miles traveled to accomplish 1,225 arrests for fish and game law violations. The officers also spent 1,477 hours in court, 4,422 hours in meetings, 3,006 hours in equipment maintenance, 2,281 hours on office work, and 7,513 hours on duties other than law enforcement. They investigated 2,072 complaints of violations.

The Information Extension Officer for the region is the specialist who is concerned with all public relations problems and programs in the region. He is engaged in a widely varied scope of work aimed at properly presenting the region's activities, policies and program to the people of Northwest Florida. ●



ONE OF THE highlights of the past biennium for the Everglades region was the moving of the Regional Office from Okeechobee City to the newly constructed Commission Office Building, located at 551 Military Trail, in West Palm Beach. This move meant a more centrally located operation, both geographically and population-wise, for regional personnel.

The Everglades Region encompasses nearly eight million acres of land area, ranging from the populous tourist resorts of the gold coast to the forbidding primitive areas of the Everglades.

The Region includes 10 counties, which are Dade, Broward, Collier, Indian River, St. Lucie, Okeechobee, Palm Beach, Monroe, Martin and Hendry. The two largest counties of the Everglades Region, both in land areas and in populations, are Dade and Palm Beach.

## *The* **Everglades Region**

The Everglades swamp lands have been described as a huge, shallow, creeping river hidden by a blanket of sawgrass. It is sometimes difficult to realize, while riding through the central part of the Everglades Region, that just 50 miles on either side of you are populous tourist resorts bulging with people and their activities. On the other hand, a person traveling down the fabulous coast of the Everglades Region would find it equally difficult to visualize the vast remote stretches of cypress strands, flat pine and palm hammocks that dominate the northern and west central portion of the Everglades Region. The never ending expanse of sawgrass spreads its reedy vegetation as far as the human eye can see in the southern end of the Region.

All these wonders of nature so abundant in the Everglades Region present a challenging and fascinating country that attracts more and more



**LOUIS F. GAINES**  
Manager

sportsmen and sightseers each year.

Certainly this Region contains some of the most unusual hunting and fishing in the world.

The distinctive mark of the Everglades Region is the need for highly specialized equipment to hunt, fish, explore or work the uncivilized areas. More 'glades sportsmen have evolved mobile equipment capable of conquering the remotest areas. So proud are they of their equipment—swamp buggies, airboats, half-tracks or weasels—that two of the more exciting events in South Florida are the "Swamp Buggy Day" parade and races at Naples on the southwest coast, and the airboat races held each year in West Palm Beach and west of Miami on the Tamiami Trail, where owners compete for the highest honors.

The Commission's Everglades Region contains over one-third of the population of the State of Florida. It also contains some of the most desolate wilderness areas. This means that the Regional Office, located in West Palm Beach is constantly faced with specialized problems, peculiar only to this Regional operation.

This Region is staffed by a force of 21 Wildlife Officers, four Area Supervisors, one Pilot, one Regional Fisheries Biologist, one Regional Information Officer and a Regional Manager. Most of these men were trained by many years of association with the vast reaches of the Big Cypress, Lake Okeechobee and Everglades Sawgrass, even before coming to the Commission for employment. Such experience is helpful to our conservation job and to wilderness survival, in view of the many dangers encountered in the more isolated areas.

Most of the Region's highly specialized equipment was developed by personal knowledge and experimentation by our officers. Through the years, the Region's Wildlife Officers

have designed and built stronger and faster airboats, to give the Officer the extreme advantage in the 'Glades, in spite of their added equipment, such as extra gas and camping equipment necessary for extended law enforcement patrols. Special tracks for the Commission half-track mobile equipment had to be developed, so the equipment would be reliable at all times and not fail at a crucial moment.

This transport experimentation is still going on, and the results have been appreciable. There is still the ever-present problem of more and more hunters and better equipment invading this Region each year. The Everglades personnel have to continue to improve equipment to widen its range and potential in order to keep pace with the ever-increasing number of sportsmen in the area.

The four types of terrain found in the Everglades Region make it necessary to use specialized equipment to patrol areas. Airboats are a must in the sawgrass area, while swamp

outboard motorboats to patrol the open waters.

The Region has added a two-place helicopter, during the Biennium, to its inventory of specialized equipment. This aircraft is equipped with pontoons, making it adaptable for use on land or water. The Regional Pilot now serves the Regional Personnel as, both an airplane pilot and a helicopter pilot.

Besides their primary duty of law enforcement, Wildlife Officers in this Region are continually called upon for many tasks ranging from collecting biological data to rescue work. Throughout the past two years, many messages of sickness and death were delivered to sportsmen deep in the 'glades areas and several rescues were made of fishermen in overturned boats and hunters lost in the swampy Everglades. Hunters accidentally shot or stricken with sickness were given first aid and swift transportation to hospitals. Creel census and bag checks were often made by Wildlife Officers, to aid in

obtaining a more complete picture for the Game and Fish Management Divisions projects.

The demand for fisheries efforts on both public and privately owned waters is still increasing throughout the Everglades Region, owing to the rapid growth and development of the areas involved. The Regional Fishery Biologist inspected many privately-owned ponds throughout the Everglades Region, and sound management advice was given to the pond owners. The management problems encountered most within the Region are non-fertile waters and unbalanced fish populations.

The Fisheries Biologist assisted in fish kill reports. The Biologist also assisted in numerous fish projects, outside of his normal duty station, which consisted of surveys, both ground and air, of lakes and streams.

Progress made during the Biennium in other Regional and Divisional operations of the Everglades Region is adequately presented in the various reports contained in this Biennial Report. ●

#### RECAPITULATION WILDLIFE OFFICERS ACTIVITIES

Everglades Region  
1958-1960

Miles Traveled .....	845,186
Arrests Made .....	1,655
Land Patrol—(Hours) ...	116,754
Water Patrol—(Hours) ..	11,537
Meetings (Hours) .....	1,879
Court (Hours) .....	2,665
Miscellaneous (Hours) ...	7,896
Complaints Investigated ..	1,988
Equipment Maintenance (Hours) .....	8,651
Spent Office Work (Hours)	2,014

buggies and half-tracks are often used during a low-water period. Swamp buggies, half-tracks and weasels are mandatory in the big cypress, where trees, rocks and mud would soon rip the bottom from an airboat or bog down a jeep. The northern flat pine portion of the Region requires only jeeps and automobiles. In the Lake Okeechobee area, consisting of open water and marshy areas, airboats are most suitable, with one inboard and several







# The Central Region

**D. C. LAND**

**Manager**

**T**HE CENTRAL FLORIDA REGION, also known as the Fifth Conservation District, is composed of Brevard, Citrus, Flagler, Lake, Marion, Orange, Osceola, Putnam, St. Johns, Seminole, Sumter and Volusia Counties. Smallest of the counties is Seminole, with 347 square miles, while the largest is Marion, with 1,624 square miles. The entire area of the Central Region covers 11,879 square miles, and includes some of the finest hunting and freshwater fishing areas in the State, among which are the Ocala National Forest and the St. Johns River with its tributaries.

In the last biennial report, it will be noted that a special law-enforcement area, with its own patrol crew, namely the St. Johns River, including Lake George and Crescent Lake, was created. This crew was assigned to work the St. Johns River from

the north boundary line of St. Johns County to Sanford. The task was to control all types of illegal fishing, with an emphasis to putting a stop to electrical or "monkey fishing." The crew has consistently been equipped with the best possible boats and high-speed motors. It should be reported that the Wildlife Officers have harassed and arrested the fishermen who engage in illegal activity to the extent that the illegal activities are not considered a profitable business on the St. Johns River at this time.

A crew of 28 wildlife officers and three area supervisors handle the law enforcement work in the Central Florida Region. Approximately four men devote full time to the St. Johns River-Lake George water area, and two others work part time there. All other officers primarily work the woods.

The rest of the staff is composed of the regional manager, information extension officer and secretary-radio operator.

Other activities within this region include the work of game management personnel, covering game management areas which are located in this region, the Lake Fishery Experiment Station at Leesburg, the office of the Youth Conservation Education Section of the Information and Education Division at Ocala, the Youth Conservation Camp at Lake Eaton in the Ocala National Forest, the Communications Division at New Smyrna Beach, and the Aviation Division located at the municipal airport in Ocala.

There are five base radio stations within the Region, located in Ocala, Leesburg, San Mateo (Putnam County), Tomoka (Volusia County) and Magnolia (Osceola County). The first two stations are operated by Commission personnel. Remaining three stations are operated by Florida Forest personnel under a co-operative agreement. All Wildlife Officers, except one, are equipped with mobile units in their vehicles and, wherever possible, all personnel have residence telephones creating a minimum of delay in handling emergency matters and administrative problems.

During the biennium of 1958-1960, Wildlife Officers in the region traveled 1,058,271 miles. They made 1147 arrests, spent 133,610 hours on land patrol and 34,800 hours on water patrol. In addition to this, they spent 19,706 hours on miscellaneous type duties.

Advancements are made in the type of equipment used by officers as fast as can be afforded. Seventy-one percent of the officers have vehicles not older than 1958 models, 24 of the current 29 officers have boats, motors and trailers, and there are three patrol airboats available at all times in this region.

During this past biennium, the third stage of chemical renovation of Lake Apopka was finished, and was very successful. Fishing started to improve after the first poisoning, and has improved successively with the other two.

On January 7, 1960, the Central Florida Region moved its personnel and equipment into a new office

building owned by the Commission, built on land donated by the State Industrial Schools Commission which was formerly a part of the State Industrial School for Girls property in Ocala. The building faces State Road 40 (also known as Silver Springs Boulevard) and is just east of the city limits. The building is modern, but simple, and its simplicity and efficiency is in keeping with the ideals of the Commission.

During the past two years, some changes were made in Game Management Areas throughout the Central Florida Region. In 1957, work was started on the 12,200 acre Guano River Management Area in St. Johns County. Of this 12,200 acres, 2,200 acres is in marsh land. The other 10,000 acres includes a highland peninsula and a salt marsh. Work has progressed satisfactorily on this management area and, in the future, it should be an excellent migratory waterfowl area.

In 1958, hunting was allowed on the Citrus Wildlife Management Area (formerly known as the Withlakoochee Project) for the first time. The first season was a one-day hunt only. In 1959, archers were allowed to hunt on the area for approxi-



**SERVICE AWARD**—D. C. Land, Game and Fresh Water Fish Commission Regional Manager for the Fifth District, completed 26 years service in 1961. Land, who was first employed as an enforcement officer, received a special service award from District Commissioner Don Southwell.

mately 10 days. Gun hunters were allowed on the area in a series of three, special two-day hunts, from applications sent to the Tallahassee Office. The deer herd is considered to be of good size on this area, and an attempt is being made to stock the area with turkeys to see if they will successfully reproduce.

In 1959, the Sumter-Citrus Management Area was withdrawn as a Public Hunt Area, leaving, in addition to the two mentioned above, the following Wildlife Management Areas in the Central Florida Region: Ocala National Forest, Holopaw (Osceola County), Farmton (Volusia County), Tomoka (Volusia and Flagler Counties; approximately 50,000 acres were added to this in 1959), Richloam (Sumter, Hernando and Pasco Counties), and Croom (Hernando and Sumter Counties).

Every species of native game animal, migratory and non-migratory game birds, and waterfowl are available to the hunter in this region.

Personnel of the Central Florida Region will continue to strive to bring better hunting, fishing and conservation practices to the people within their own area and the rest of the State of Florida. ●





## *The* South Florida Region

**T**HE South Florida Region, extending along the central Gulf coast of peninsular Florida and inland to the Kissimmee River and Lake Okeechobee, encompasses a thirteen county area of 7,220,000 acres. A picturesque and modern Florida is exemplified in this region composed of Hernando, Pasco, Pinellas, Hillsborough, Manatee, Sarasota, Charlottee, Lee, Polk, Hardee, DeSoto, Highland, and Glades counties.

The Regional office, located at Lakeland, serves as headquarters for coordination of regionwide Commission programs and policies. A building site for a new Regional office building was recently obtained by the Commission and construction is planned for the next biennium. This new building will provide combined office space for this Region and the Hyacinth Control Section of the Fish Management Division.

The Regional personnel complement includes the Regional Manager, three Area Supervisors, twenty-three Wildlife Officers, ten Game Management personnel, two Hatchery personnel and a Fisheries Biologist, Information and Education Officer, Pilot, Communications Engineer, Stenographer and Clerk-Typist. The functions of the Com-

mission are administered through the Regional Office to meet the challenge of progressive wildlife resource conservation through a balanced program of regulation, enforcement, management, education and research.

Commission work in this Region continues to be directed toward meeting the extensive demands for outdoor recreational opportunities made by our rapidly increasing resident population. Wildlife conservation—including both preservation and use management—must be ultra-progressive in scope and application. A continuous challenge is effected by spreading urban areas, an accelerated change in agriculture and extensive industrial growth. Large acreages of prime wildlife habitat have fallen before this growth, and the process continues at a terrific rate. With proper management, our great natural resource wealth will meet these demands.

The various duties of our wildlife officers included many hours of work with other divisional person-

nel in many programs. Fish restoration, fish population sampling and census, game census, game habitat improvement, fair and exhibit construction and operation, and youth conservation instruction were some of the additional activities besides pure law enforcement land and water patrol. Extensive public service work is rendered in the form of aiding other public agencies, especially in participation in rescue work and other emergency situations.

Professional improvement has been emphasized, and regional and area meetings have included instructional periods on the many and varied subjects applicable to wildlife law enforcement.

The Information and Education Officer has accomplished much in this employee information programming. The surface has merely been scratched regarding this subject. Personnel must be continually trained to match the progressive ideas directing wildlife conservation today.

Publicity and public relations programs were continuously emphasized during all phases of our operation during this biennium. This work was coordinated by the regional information and education officer. Specific management, enforcement, and research programs were publicized through varied communications media. Television, radio, newspapers, magazines, films, exhibits, and speeches were used. Instructional and educational talks were made, and films were shown to all age groups in many civic, school, church,

**D. E. TIMMONS, JR.**  
Manager

and professional clubs and organizations.

The trend in wildlife conservation education has been to emphasize the many values of wildlife, serving not only the hunter and fisherman, but also the average public through its irreplaceable aesthetic value. Accordingly, recreational values are not based on the kill or the catch, but more on the opportunity of visiting the woods and fields, the lakes and rivers, and throughout the outdoors realizing this as recreational fulfillment.

An increase in the license sales in the South Florida Region verifies the increasing numbers of hunters and fishermen. It must be recognized that certain factors will tend to fluctuate numbers of licenses sold from year to year. The high rainfall during this two year period has been very harmful to wild turkey and bobwhite quail populations while fresh water fishing has been phenomenal. A proportionately small increase in number of hunting licenses sold is therefore quite logical, as is the large increase in number of fishing licenses sold.

Wildlife law enforcement in this Region has progressed as better qualified and trained personnel with better equipment are being placed in the field. Activity reports show that during this biennium a record number of arrests were made.

The exhibit at the Florida State Fair has been improved each year with better display facilities designed and built for showing the game and fish. The Commission personnel present explain details about the species of native wildlife on exhibit, relate interesting facts about our wildlife and its conservation, and answer the many questions asked by the viewers. The usual display of live specimens of Florida game animals, birds, fresh water fish, and reptiles was varied to include a panther one year and a bear the next. These two native species are of particular interest to many people since they are rarely sighted in the wilds today.

The Wildlife Management Areas in this Region produced some excellent hunting for deer and other game birds and animals. The Avon Park, Richloam, Croom, Lee, Fish-eating Creek, and Cecil Webb Public

Hunt Areas have gained in popularity as a place for the average man to go hunting, fishing and camping. As larger acreages of private lands are fenced and posted, the demand for public accessible lands and waters has become a major Commission problem. Land use practices and current land values restrict the acquisition and maintenance of more public hunt areas in this Region. Continued research may discover some practical solution for attaining more such facilities in the future.

Shooting preserves providing both public and private hunting facilities have become more in evidence throughout this Region during this biennium. Their popularity will undoubtedly increase as a solution for "a place to hunt." This type of hunting is gaining in popularity.

The Audubon Society gained valuable information on wading bird populations in this Region during this biennium. In the course of study of these birds, including ibis and egrets, several new nesting colonies were located by Commission personnel and referred to the Society.

The Fisheries Biologist has done considerable research and technique development work in addition to routine pond management, fishery survey, and lake and stream management projects. The list of ponds under management now numbers approximately 860. Many of the fish used in stocking these ponds are produced at the Winter Haven hatchery.

Pollution effect analysis and prevention studies have been a major fisheries project during this biennium. The principal problems have been the appearance of large quantities of industrial wastes in streams and lakes, and residential and agricultural development effects on lakes. The increased values being placed by the average sportsman on game and fish habitat have been reflected by the considerable public reaction to the water and wildlife destroying pollution.

Wildlife conservation is service with progress—a kaleidoscope of people, wildlife and the outdoors. During this continuous change of elements, the South Florida Region is justly proud of its accomplishments of providing the many recreational opportunities for present and future Floridians. ●

Fishing License Sales	1958-59	1959-60
Resident State	96,355	100,597
Non-Resident State	1,543	1,947
Non-Res. 14 day	6,129	7,047
Non-Res. 3 day	10,835	12,040
Total Number	114,862	121,631
Total Revenue	\$213,270.25	\$228,695.75
Hunting License Sales		
Resident State	21,002	21,064
Resident County	13,051	13,229
Resident Other County	163	177
Non-Resident State	41	34
Non-Res. 10 Day	288	243
Private Preserve		1
Total Number	34,545	43,748
Total Revenue	\$174,739.25	\$174,868.75

#### RECAPITULATION OF WILDLIFE OFFICER ACTIVITIES

	1958-59	1959-60	Total
Miles Traveled	563,025	509,302½	1,072,327½
Arrests Made	1,021	694	1,715
Hours Land Patrol	70,974	65,621	136,595
Hours Water Patrol	3,837	2,495	6,332
Hours in Court	1,027	1,030	2,057
Hours in Meetings	1,341	1,171	2,512
Complaints Investigated	946	864	1,810
Hours Equipment Maintenance	1,123	1,092	2,215
Hours Miscellaneous Duties	5,687	4,973	10,660
Hours Office Work	812	701	1,513





# YOUTH CONSERVATION EDUCATION

**DENVER STE. CLAIRE**  
—SECTION CHIEF—

**T**HE PHILOSOPHY is as follows:  
In many communities over the nation conservation education programs are being offered in schools and in youth groups. What better time can we find to teach our children about man's dependence upon land and water than during the formative years? What better way to teach them the proper concepts of resource use than through our teaching efforts in our youth programs and our camps?

Our efforts in teaching our youth in these various type programs are a safeguard until more of our schools are prepared to offer proper conservation training.

We cannot escape the urgent need for a dynamic type of conservation education in our schools that will be in accord with developing problems, achievements, and trends of our times.

So much depends on our youth; so much more depends on the adults

who must see that the youth of Florida are in a position to accept the proper concepts of conservation.

Herein lies a direct challenge to any state agency involved in the dissemination of education and information. Thusly, the information and education of Florida's youth in nature and wildlife and other resources has become a vital part of the Game and Fresh Water Fish\*Commission's education policy.

The Information and Education Division, through its Youth Conservation Education Section, has been charged with this great responsibility. Consequently a program was launched in January of 1952.

No sound program was ever initiated without a definite purpose. Fully cognizant of this, a program was designed for Florida's youth. It had to challenge and move our youth into action.

In developing a multi-phase program five-fold concepts were con-

sidered. They are:

1. To train our youth toward a better understanding of conservation of our natural resources.
2. To instill in the minds of our youth a greater appreciation of the outdoors and to recognize the great need of protecting and improving the State's outdoors.
3. To teach them the wise use and planned maintenance of our soils and waters.
4. To guide them in the sound use and intelligent management of our fish and wildlife.
5. To help them foster the proper utilization and systematic perpetuation of our forests.

Using these five concepts as the basis for the program, it has been necessary to employ various methods to capture and hold the interest and cooperation of youth. To stimulate their thinking to a better understanding of conservation of our natural resources, the program has been designed to include as many challenges as possible.

The multiphased program sponsored by the Commission includes the following Florida divisions:

The Youth Conservation Corps; the Youth Conservation Clubs; Youth Conservation League; Youth Conservation Camps; Scouting for Conservation; Boy Scouts of America; 4-H Clubs; Camp Fire Girls, Inc.; Junior Garden Clubs; Conservation Camps for Special Groups; Florida State Adult Advisory Council and Council Workshops.

## YOUTH CLUBS

The Youth Conservation Corps is comprised of all club members within the state. The Youth Conservation Clubs Program has developed to a stage where it now includes 25 organized clubs in the State League. These clubs are found in some of the principal cities of the State of Florida. Other than the 25 affiliated clubs, there are other known organized non-affiliated youth conservation clubs. When a club is organized, it is not mandatory for the club to join the League. The club may remain independent, but it still may avail itself of the many services which the Commission extends in its educational program.

The clubs are organized by the Florida Game and Fresh Water Fish Commission. Any interested adult group can sponsor one of the clubs.

A booklet, "How to Organize a Youth Conservation Club," has been prepared by the Information and Education Division. A second booklet, "How to Operate a Youth Conservation Club," has recently been printed. The third and final booklet in this series, "The Youth Conservation League and Camp," is in the process of being written.

### YOUTH LEAGUE

The Youth Conservation Club League, Inc., was created for the purpose of bringing together the clubs and their members, and to consolidate their efforts toward a greater understanding of conservation. Only those youth clubs that have been organized and have a charter and by-laws are eligible for League Membership.

The clubs that join the League are required to meet certain standards; when these standards are met, they are invited to join and participate in all League activities.

Each year, at an annual meeting held at the Youth Conservation Camp, delegates from the various affiliated clubs convene for the purpose of discussing club and League business. At the annual meeting, the Board of Directors, elected by the delegates, prepares an agenda for the ensuing year, and makes recommendations for the annual summer camp.

The Board governs and creates policies for the League and affiliates.

### YOUTH CAMP

The Youth Conservation Camp has been established for the purpose of giving our youth an opportunity to enjoy the outdoors, and to learn more about conservation. At camp, they join forces for a week of combined recreation and outdoor education. During the encampment, the youthful conservationists learn new concepts of conservation and are given the opportunity to recognize that conservation of our natural resources means "the wise use of the resources with the greatest good for the largest number of people for the longest time." They learn that the wealth of the Nation depends upon its available resources and upon the resourcefulness of its people. At

camp, they are made aware that conservation applies to all people, urban and rural, and, to be most effective, must be practiced universally.

Qualifying for target shooting has been one of the camp's important activities. The program is approved by the National Rifle Association. The older boys shoot .22 calibre rifles, while the smaller boys use air rifles.

In 1958, the Hunter Safety Program was offered as a supplement to the Rifle Instruction Activity.

The Youth Conservation Camp is located on 57 acres in the Ocala National Forest on Lake Eaton. In 1955, a mess hall, which will accommodate 400 young campers, was constructed. The building also contains the Conservation Room. Here are installed blackboards and exhibits of Wildlife, Forestry, etc. Educational films are shown here as well as study skins of wildlife found in Florida.

Ten concrete-block cabins were also constructed to accommodate a total of 100 campers. Seven squad tents are also available to house additional campers. A power line has been installed to supply electricity. A winding road trails from State Road 314 to the center of Camp. The road was constructed by the State Road Department in 1954. A sandy beach has been pumped up.

During the summer of 1957, the Youth Conservation Camp operated for 12 weeks. In 1958 it operated for

eight weeks, including one two-week camping period which was offered on a trial basis. During the past eight camping seasons, over 4,000 young campers attended the camp and participated in the program.

The operation of the camp is the direct responsibility of the Chief of Youth Conservation Education Section, who employs a staff, each summer, which consist of a director; program, waterfront, nature, and campcraft directors; a registered nurse; senior counselors; chief cook; assistant cook and dishwashers. A camp custodian resides at the camp year around. The entire staff is responsible to the Chief.

Plans for future construction call for an additional 10 dormitory-style buildings, and a recreation building. The recreation building will include a conservation library, sick bay, administration offices, work shops, stage, small auditorium, lecture rooms and sleeping quarters. Plans also include additional docks for boating, fishing and swimming, and a larger beach.

The encampment for 1959 was the sixth held at Lake Eaton. Two previous encampments were held in the southern part of Florida, making a total of eight annual encampments.

Programming for each summer camp is considered most important for the young campers. Considerable attention is given to outlining a program which will be interesting.



Through the experiences of past years, it has been determined that a program offering the greatest interest is one which includes active participation. The lectures or talks have been minimized; and wherever instruction is given to the young people, discussion groups are organized. These discussion groups allow for a greater exchange of ideas and more participation by individuals.

Each encampment is evaluated. The following year's program is developed by studying recommendations for the preceding year. Innovations are constantly employed to improve the program. The Director and counselors are alert to evaluate any part of the scheduled program, and to make the necessary changes which will bring about the most successful results.

Age groups are now assigned special weeks. Ages 8-12 and 13-16 have their separate individual programs and encampments. This practice was initiated during the summer of 1958 and was found most successful. The counselor-to-camper relationship was greatly increased.

Counseling is the most important phase of the summer camping program. It is important to have qualified counselors who know how to work with, and understand, their young charges. Each encampment calls for better and more qualified and enthusiastic counselors. These men and women must have a sincere interest and desire to help the youngsters. Prior to opening of camps, a workshop for training counselors is held.

### SCOUTING

In May, 1957, the Florida Scouting for Conservation Program was made public. The Scouting for Conservation Program, at the time of its inception, had only one other state program like it. Scouting for Conservation is a program created by the Game and Fresh Water Fish Commission for the use of the Boy Scouts of America represented by the nine councils in the State of Florida. It re-emphasizes conservation concepts. There are three degrees in this program: Ranger, Chief Ranger, and Florida Wildlife Conservationist. Certain specified merit badges must be completed for each award. In addition to these merit badges, there are fourteen conservation projects for them to select from

and complete.

These projects must be certified by both the scoutmaster and a representative from the Game and Fresh Water Fish Commission. Each award earns a certificate of achievement. A cloth designed insignia with the rank—Ranger, Chief Ranger, or Florida Conservationist—is presented to the Boy Scouts attaining the awards.

### GIRL SCOUTS

In June, 1957, the first Camp Wildlife for Girl Scouts was established at the Youth Conservation Camp. There are three councils of the Girl Scouts of America located in Florida who use the camp. This was an experimental camp, and was so successful in its first year that the fourth annual wildlife encampment was completed this past summer, 1960.

During Camp Wildlife for Girl Scouts, many of Commission biologists and technicians, and other experts, have talked and demonstrated many of the subjects which are related to conservation. Some of the specialists are qualified to pass on merit badges.

### 4-H CONSERVATION

During the spring of 1959, after many months of negotiating and conferences, a 4-H program was approved by the Florida Department of Agriculture Extension Service and the representatives of the Game and Fresh Water Fish Commission.

The purpose of this program is to encourage 4-H boys to participate in all phases of conservation of our natural resources: wildlife, soil and water conservation, and forestry. This program is intended to stimulate 4-H boys to complete a program of projects in each of these fields of conservation with a system of awards leading to the title of Florida Wildlife Conservationist.

The following awards are offered: County level—Primary Conservation Award. State level—Florida Wildlife Conservationist Award.

*Primary Conservation Award* The 4-H boy working toward the Florida Wildlife Conservation Award begins by completing a 4-H wildlife project. Upon completion, he receives a Primary Certificate indicating he is working toward the Florida Conservationist Award.

*Advanced Conservation Award*

The 4-H boy who has completed the 4-H Wildlife Conservation Project and received the Primary Award will carry on another such project and either a soil and water project or a 4-H Forestry Project. By completing both in an outstanding manner he receives an Advanced Conservation Award.

*Florida Wildlife Conservationist* 4-H boys who have received the primary Conservation Award and the Advanced Conservation Award working toward the title of Florida Wildlife Conservationist, must complete a 4-H wildlife project, a forest project, and a soil and water project. Upon completion of these three projects, and an inspection of the records by the Award Committee, the 4-H boy receives the Florida Conservationist Award. He will receive an appropriate plaque, a certificate, a medal, and a trip to Tallahassee to attend the Awards Presentation Meeting. The Governor will present the awards.

The program involves at least six completed 4-H projects in a minimum of three years.

### JUNIOR GARDEN CLUBS

In a conference with a special committee appointed by the President of the Florida Federation of Garden Clubs, initial plans were outlined to create a joint conservation program between the Junior Garden Clubs and the Game and Fresh Water Fish Commission. The program offered by the Commission is designed to supplement the five areas in which the Junior Gardener receives instruction. The Commission has taken three of these areas and created a program which will be approved by the state Federation of Garden Clubs. The three conservation degrees in which the Junior Gardener may aspire are: The Order of the Dirt-dauber, The Order of the Sprig and Sprout, and the Order of the Florida Wildlife Conservationist. In each level, certain specified and required projects are to be completed. These projects are in the areas of nature, conservation and horticulture. Each level includes a grade, starting with the fourth. Each order may be earned by completing the projects assigned within a given grade. Certificates and pins will be awarded to those completing the three progressive stages.





### CAMP FIRE GIRLS

A program in the process of completion is another sponsored by the Game and Fresh Water Fish Commission in cooperation with the Camp Fire Girls, Inc., in Florida. The program received national approval and commendation. It was previously approved and sanctioned by the Florida Camp Fire Girls.

Both groups (Bluebirds and Camp Fire Girls) may complete the required conservation project to be eligible for the various degrees. The Order of Neoga (Dakota Indian) and the Order of Osoha (Dakota Indian) may be earned by completing the required conservation projects. The third and final degree will be the same as in other youth programs.

A similar program is in the planning process for the Future Farmers of America. One will also be created for the Girl Scouts.

### MERIT SYSTEM

To encourage both boys and girls who are members in conservation clubs, the Merit Point System was inaugurated in 1954. The Point System includes 122 conservation projects. These projects have been prepared and outlined by the Youth Conservation Education Section. These projects fall into two classes, Self Improvement and Group Activity. Records of projects completed by each member, and the points earned, are kept on file within the local club. A second copy is sent to the Office of the Chief of Youth Conservation

Education, 2520 East Silver Springs Boulevard, Ocala, Florida. This can be done monthly, quarterly, or yearly.

When a member has earned 10,000 points, he is called a Ranger and can obtain a Ranger patch for his uniform by submitting his points to the Chief. Other ranks that can be obtained by earning points are as follows:

Forester	30,000 points
Chief Ranger	45,000 "
Chief Forester	60,000 "
Junior Conservationist	75,000 "
Junior Wildlife Officer	100,000 "

Patches are also available for these ranks. Points earned for each rank can be included in the number of points needed for the next highest rank.

Each year the Outstanding Junior Conservationist is chosen. This special award goes to the club member who has earned the most points during that year and has completed several qualified conservation projects. All projects completed must be certified by the advisor of the club, a member of the Game Commission, a school teacher, parents or an older friend.

Tabulation Sheets for keeping records of Points earned for Projects completed are available. A great deal can be learned by completing these projects. They have been planned with the club member and conservation in mind.

### OTHER PROGRAMS

Our continuing conservation pro-

grams for 1961 include Future Foresters of Florida, Woodmen of the World, and Girl Scouts of America. There are other programs in which our energies must be directed.

### ADULT COUNCIL

An Adult Advisory Council was organized in April of 1959. A full operating compliment will consist of twenty-five members. Some of the board members represent youth organizations such as Girl Scouts, Boy Scouts, Junior Garden Clubs. The members are citizens who serve without pay. The council has a chairman, and is empowered to create and recommend policies in programs for the Youth Conservation Education. An annual conference for club adult advisors will also be held.

### CRIPPLED CHILDREN

Another highly successful experimental program conducted this past year, 1959, was the cooperation plan of the Florida's Society for Crippled Children. Eight handicapped children were sent to the two-week session at our Florida Youth Conservation Camp. A therapist and an aide-counselor supplemented the staff. The youngsters were so elated at having a chance to be accepted as regular fellows that all decided to return the following summer. Plans call for a one-week encampment for 60 of these young people, who will share their experiences with one another. We have been advised that within a year or two the Florida Crippled Children's Society will have their own camp as the result of the success of the program.

### SUMMARY

We have only begun this tremendous multiple conservation program in Florida, that may eventually be realized. It is for that reason that we have become willing partners and program planners with other youth service organizations. It is our hope and our plan to cooperate and work with as many organizations as possible in order to emphasize the great need for understanding of our natural resources and their wise use.

It is only through the combined efforts of all of us everywhere that any kind of success, conservation-wise, will be accomplished, and that the people will be informed and educated to the programs of the Game and Fresh Water Fish Commission. ●



# The COMMISSIONERS

Julian R. Alford, Tallahassee, was appointed April 4, 1958, to serve on the Game and Fresh Water Fish Commission, and was subsequently elected to serve three terms as Commission Chairman.

A well-known attorney at law, Mr. Alford has long been an active worker in church and civic affairs. He has also been active in Scouting affairs, and lists hunting, fishing and athletics as his favorite recreations.

In commenting on his tenure on the Commission, Alford has this to say: "My service on the Commission has offered me the opportunity for public service in a chosen field. It has been a period of pleasant relationship with the peoples of the State of Florida and with the staff who executes Commission policies. I believe we are building on a solid

foundation which will result in hunting, fishing, and recreational dividends for our citizens and visitors. Credit for this progress should properly go to dedicated conservationists throughout the State and to a loyal, competent staff."

Mr. Alford was born in Tallahassee April 22, 1912.

In church affairs, he is a Ruling Elder in the Faith Presbyterian Church of Tallahassee, and has also been a member of various boards and committees from the General Assembly down to the local church level. He is a Past Moderator of the Synod of Florida, Presbyterian Church U. S.

In Boy Scouting work, Mr. Alford is a holder of the Silver Beaver Award. He is a past president, and presently an executive board mem-

ber of the Suwannee River Area Council of the Boy Scouts of America in Florida.

In addition to much local civic work, Mr. Alford is a member of the Leon County Forestry Fire Prevention Committee. He served on the Governor's Advisory Committee on Water Access and Traffic Safety.

Mr. Alford is wed to the former Miss Dorothy Price. They have four children: Dorothy Ann, 20; Julian R., Jr., 18; Elizabeth Clark, 14; and Marvin Price, 11.

## FIRST DISTRICT

T. Paine Kelly, Jr., of Tampa, was appointed April 3, 1958, as Game and Fresh Water Fish Commissioner from the First Conservation District of Florida.

As a Commissioner, Mr. Kelly believes that the single most important objective of the Commission is to expand the public hunting grounds and public fishing facilities throughout the state. He holds that such expansion work must be done just as rapidly as the local conditions and populations of fish and wildlife may permit. He feels, however, that such work must always be performed in accordance with the best possible conservation practices and techniques now available.

Long active in civic and business affairs, Mr. Kelly is a life-time outdoorsman, and an ardent golfer, fisherman and hunter.

As a practicing lawyer, Mr. Kelly is able to contribute much practical legal knowledge and business experience to the conduct of the Commission's affairs.

Born in Tampa August 29, 1912, Mr. Kelly now serves as chairman of the Committee of 100 of the Tampa Chamber of Commerce.

He also serves as a director of the Boys' Club of Tampa, and is the National Associate of Boys Club of America for South Florida.

He is a past president of the Tampa Chamber of Commerce, the President's Round Table of Tampa and the Tampa Exchange Club.

He married the former Miss Jean Baughman. The couple have three children: Carla Jean, 18; T. Paine, III, 17; and Peggy Jo, 6.



**Julian R. Alford**  
Chairman  
Third District



**T. Paine Kelly, Jr.**  
First District



**Charles L. Hoffman**  
Second District

Charles L. Hoffman, of Jacksonville, was born April 11, 1919, and appointed January 23, 1961, to the Game and Fresh Water Fish Commission from the Second Conservation District of Northeast Florida.

Long prominent in banking and civic affairs, Mr. Hoffman lists the outdoor sports of fishing and hunting as his greatest pleasures. He believes that our fish and game represent extremely valuable natural resources, from both the financial and recreational standpoints.

Now serving as Vice President of the State Bank of Jacksonville, Mr. Hoffman attended the University of Virginia, where he received a Bachelor of Arts Degree, with a major in agricultural economics.

Shortly after graduation from college in 1941, Mr. Hoffman enlisted in the United States Marine Corps. He served in the World War II Pacific Theatre for two and a half years in the Twenty First Regiment of the Third Marine Division. He was honorably discharged in December, 1945, with the rank of Captain.

He believes that our game and fish populations and resources can be increased to meet the growing pressures of human populations only by applying wise practices of conservation and management. "To insure good hunting and fishing," he says, "our citizens must be conservation-minded."

Mr. Hoffman believes that the Commission has, and will continue to, increase the total acreages of land set aside for game management and



**Dr. J. W. Cosper, Jr.**  
Fourth District

public hunting purposes. He feels that the best in Florida fishing will be insured by the Fisheries Division through programs for control of undesirable fish, such as gizzard shad, and noxious weeds, such as hyacinth, as well as the hatchery stocking program for new and renovated fishing waters.

A member of the St. Marks Episcopal Church, Mr. Hoffman is an ardent worker for the Community Chest-United Fund, the Cancer Society of Duval County, the Jacksonville Symphony Association, and the Florida Amateur Athletic Union.

He is a member of the Jacksonville Area Chamber of Commerce and the Meninak Club. He holds club memberships in the Timuquana Country Club, the Florida Yacht Club and the River Club.

Charles L. Hoffman married the former Barbara F. Marshall, of Cedar Rapids, Iowa. The couple has three children—a son, Chip, who is 15 years of age, and two daughters, Mimi, 13 years of age, and Lillian, 11 years of age. The family resides at 3611 Richmond Street, Jacksonville.

#### **FOURTH DISTRICT**

Dr. James Watson Cosper, Jr., who is Commissioner for the Fourth Conservation District, was born May 17, 1924, in Birmingham, Alabama. He presently resides in Coral Gables, where he practices dentistry.

Dr. Cosper attended the University of Alabama, where he received



**F. Don Southwell**  
Fifth District

the following degrees: Bachelor of Science and Doctor of Medical Dentistry from the school of dentistry.

He entered the Dental Corps of the United States Navy in May, 1942, where he saw service in the South Pacific. He was honorably discharged in May, 1946.

Dr. Cosper is a member of the Veterans of Foreign Wars, the Lions and the Junior Chamber of Commerce. He serves on the Board of Directors of the Redland District Golf and County Club. He also has served as Chairman of the Zoning and Planning Board for the City of Homestead, Florida.

Dr. Cosper is Treasurer of the Dade County Dental Research Clinic and is a member of the Board of Directors, Miami Dental Society, the Florida Dental Society, the American Dental Society, the American Society of Dentistry for Children, the International Association of Anesthesiologists, and a Diplomat of the National Board of Dental Examiners.

Dr. Cosper is especially interested in fishing, hunting and golfing. Professionally, he is interested in Dental Research, especially as related to restorative dentistry.

Dr. Cosper was appointed as a member of the Florida Game and Fresh Water Fish Commission on March 22, 1956.

Dr. Cosper is married to the former Miss Evelyn Fay Sullivan. They have one daughter, Denese Marie, aged 6 years.

## FIFTH DISTRICT

F. Don Southwell, Commissioner for the Fifth Conservation District, first came to Florida in 1917 from Michigan. Until 1931 his time was divided between Texas and Florida; building telephone lines and surveying Florida swamps and building houses in Texas.

In 1939, he left the building business and returned to Florida. He made one trip to California in 1940, to make sure that Florida was the place, and in 1941, settled permanently in Ormond Beach.

Hunting, fishing and conservation have always been Mr. Southwell's hobbies. A life-long interest in perpetuation of natural resources and wildlife, along with a firm conviction that Florida should be maintained as a "Sportsman's Paradise," resulted in the years of his active work in conservation in Florida.

Mr. Southwell accomplished much conservation work while serving the Florida Wildlife Federation as Director for many years. At times, he also served as the Federation's Treasurer, Executive Secretary, and Recording Secretary.

He is an active member of the Florida Outdoor Writers Association, and served as president of the Fifth District Sportsmen's Association in 1954, and as president of Halifax Hunting and Fishing Club for several years.

He feels that his interest and knowledge of the needs of Florida's sportsmen, and the state as a whole, led to his appointment to the Game and Fresh Water Fish Commission on June 8, 1955.

Mr. Southwell is especially interested in every phase of the Commission's work with particular emphasis on the Youth Conservation Camp at Lake Eaton, as well as acquisition of additional managed public hunting areas, extended hyacinth control operations, and the expansion of the law enforcement and education divisions of the Commission.

Mr. Southwell married the former Miss Doris Smith in 1934.

# The Administrators



A. D. ALDRICH  
Director

A. D. "Bob" Aldrich began his duties as Director of the Florida Game and Fresh Water Fish Commission on April 11, 1955. Mr. Aldrich has an impressive record of conservation experience dating from 1921.

Mr. Aldrich has long been active in the various fields of wildlife conservation through such national agencies as the American Fisheries Society, the International Association of Game, Fish and Conservation Commissioners, the Wildlife Society, the National Waterfowl Council, the Izaak Walton League of America, the Boy Scouts of America, and other professional organizations.

Mr. Aldrich is presently serving on the Advisory Council to the Outdoor Recreation Resources Review Commission, and also as a member of an advisory committee to the U. S. Forest Service on "Multiple Use of the National Forests."



DR. O. EARL FRYE  
Asst. Director

O. Earle Frye has served as Assistant Director of the Florida Game and Fresh Water Fish Commission since 1951. He first joined the Commission as a bobwhite quail research technician on January 14, 1946, and has since rendered service in many capacities and positions.

Dr. Frye is especially noted for organizing and putting into effect a progressive game management program for the Commission, with a subsequent improvement in hunting success for the Florida hunter. He has written numerous technical and non-technical articles about wildlife and game management programs for many different publications.

During recent years, Dr. Frye has been particularly active in a program to improve Commission employee standards and performance.

He is presently serving as Chairman of the National Waterfowl Council.

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**This Report Prepared By  
THE ADMINISTRATIVE STAFF**

**ADMINISTRATORS**

DIRECTOR .....A. D. ALDRICH  
ASSISTANT DIRECTOR .....DR. O. EARLE FRYE

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FISHERIES .....E. T. HEINEN  
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NORTHEAST .....CHARLES CLYMORE  
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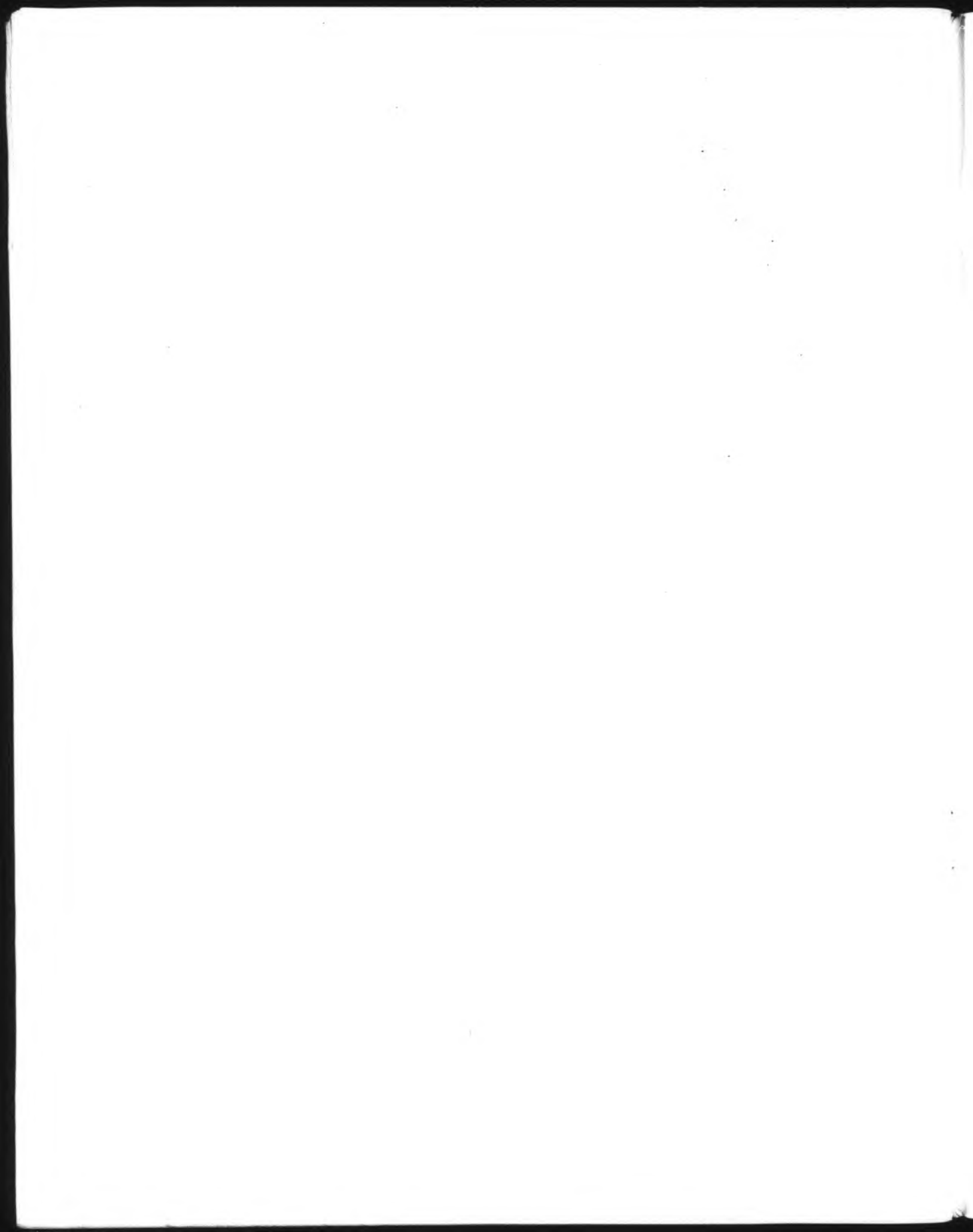
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SOUTH REGION .....Lakeland  
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EVERGLADES REGION .....West Palm Beach  
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## ABOUT THE BIENNIAL REPORT

The Game and Fresh Water Fish Commission submits, each two years, a full report covering all operations of the biennial period immediately past. This Biennial Report is submitted to the Governor and each member of the State Legislature of Florida. The Report is, in effect, a legal statement to all of the people of Florida as to the administration of their conservation monies and affairs.

Copies of the Report are also permanently filed in the State Archives of Florida, to eventually become a part of the historical record of our state.

Additional copies are requested by school and public libraries throughout the state for placement in research files used by students and other interested persons.

Additional copies are forwarded — by mutual exchange agreement — to other conservation agencies, mainly throughout North America, but also in some foreign countries. This allows all conservation agencies to keep a current information file on the status, progress and new developments of wildlife conservation work in all parts of the nation, as well as in many parts of the world.

A number of university students, in Florida and other states, request copies of the Report for use as research material in compilation of required theses.

On occasion, certain chapters of the Report are later reprinted in leaflet form to answer specific requests from interested Florida citizens, especially those who are prospective employee applicants.

The Report is also used as an informational aid in training new employees and in the "refresher" training of older employees.

The Commission's Biennial Report is customarily produced in "magazine-size," to allow better presentation and reproduction of the material, and also to reduce production costs. Many of the photographic engravings appearing in this Report are engravings previously used in the Commission-published *Florida Wildlife* magazine during the two-year period covered by the Report.

The purpose of the Biennial Report is to allow an opportunity for all interests in the state to minutely examine the operations of their Florida Game and Fresh Water Fish Commission.

ROBERT A. DAHNE,  
Chief,  
Information and Education Division.